

PHILADELPHIA, JULY 14, 1883.

## ORIGINAL LECTURES.

### CLINICAL LECTURE

#### ON THE TREATMENT OF ECZEMA OF THE HANDS.

BY ARTHUR VAN HARLINGEN, M.D.,

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GENTLEMEN,—The treatment of eczema of the hands must vary according to the locality and variety of the disease. That which is proper for acute eczema of the thin integument over the back of the hands would be useless if applied over the thickened epidermis of the palm, and what would be useful in chronic eczema of any part of the hand might be quite injurious in the acute form of the disease. In the following remarks I shall consider the management of each variety separately.

And, first, with regard to acute eczema of the backs of the hands and fingers. The skin here differs from that on other parts of the body chiefly in its comparative delicacy and in its exposed position. The constant uses to which the hands are put in the ordinary labors of the household among women and in the various occupations and handicrafts of men lead to the exposure of the skin to numerous irritants. Cooks have their hands immersed in dough and salt water; maids and washerwomen are exposed to the action of hot water and soap in washing dishes and scrubbing; bricklayers, plasterers, dyers, polishers, grocers, bakers, bar-tenders, all are exposed to moisture and the contact of irritating substances; and these occupations are chiefly apt to furnish cases of acute eczema of the hands. The appearance presented in acute eczema of the part under consideration has nothing distinctive about it. We have the small vesicles unbroken or broken with serous exudation, scratch-marks, and crusts, or occasionally the red and weeping surface of eczema rubrum. The only disease liable to be confounded with this is scabies, where the lesions are often similar. Of course to treat a case successfully the diagnosis must be made with certainty. Scabies, presenting itself usually in various parts of the body simultaneously and

showing the peculiar burrows of the itch-insect between the fingers or on the side of the hand, with a history of contagion, is the only disease with which eczema of the backs of the hands is liable to be confounded.

The treatment of acute eczema of the hands must be preventive as well as curative. The surface of the skin must be protected from air and water, and chiefly protected from the irritative agencies which so often have been the exciting causes of the disease. The baker must keep his hands from the dough, the washerwoman hers from the hot soap-suds. This is often no easy matter for those who are dependent upon their special handicraft for their daily bread. But without such abstinence from the irritating cause the prospect of speedy recovery is poor and the prognosis must be to a certain extent unfavorable. Still, much can be done in the way of protection. Gloves of leather or india-rubber may be worn; the latter, in particular, I often find of great use. Work-people imagine that they cannot manipulate while wearing rubber gloves; but it is surprising how the hands can accustom themselves to this covering. The chief difficulty is found in cases where the patient has to work in corrosive substances. Here some other means must be employed, and I think that if the hands are thoroughly anointed with some unctuous substance, as tallow, much can be done towards preventing the action of irritating substances upon them. A proper covering to protect the hands when exposed to irritants has not yet been devised, and is certainly much to be desired. Where only small areas of the skin are involved, the "liquor gutta-perchæ" of the Pharmacopœia, a solution of gutta-percha in chloroform, often acts as a very efficient protector. The patient may be provided with an ounce-bottle of the solution, having a camel's-hair brush in the cork, and may paint the affected part one or more times daily. The evaporation of the chloroform leaves a thin, impervious, and slightly elastic film of rubber.

As regards the more strictly medical management of these cases, the local treatment is by far the most important in the majority of cases, and I shall only speak incidentally of general therapeutic measures.

Acute eczema usually attacks the backs

of the hands, the sides of the fingers, and the wrists, commonly leaving the palms unaffected. Its character here is not different in any essential particular from eczema of other parts. When very acute and severe it takes on the appearance of a dermatitis, especially if too stimulating or irritating remedies are first employed. Frequently a severe eczema of the backs of the hands begins insidiously by the formation of a few papulo-vesicles, and the patient thoughtlessly applies some quack ointment, with the result of aggravating the original disease to a marked degree. If the system chance to be in such a condition as to favor the occurrence of an outbreak of eczema, any irritant may act as a torch and light up the fire of a much more general eruption. In such cases the local treatment, to begin with, must be of a most soothing character. Dilute lead-water, or, where inflammation, discharge, and crusting, with much heat, are present, lead-water poultices form often the best application to begin with. The lead-water poultice is made by mixing dry bread-crumbs with the dilute lead-water of the Pharmacopoeia until a mass of proper consistency is made, and this is to be applied cold—often ice-cold is best—and frequently repeated.

When the violence of the inflammation has somewhat subsided, or when the affection has not been so acutely inflammatory, the application of cloths wet with lotio nigra is of advantage. In other cases the fluid extract of *grindelia robusta* serves a good purpose, as in the following wash:

R Ext. *grindeliæ robustæ* fluid., f3ii-iv;  
Aq.æ, Oi.—M.

Fiat lotio.

The cloths should be saturated with this wash and applied to the skin in such a manner as to allow evaporation to proceed until they are dry. The lotion is again applied to the cloths *in situ*, and then evaporation allowed to go on as before. I find this the best plan of employing this remedy, which I have used extensively in acute eczema for some years, and which almost invariably acts very happily. Now and then I come across a preparation which, owing, as I suppose, to some defect in the pharmaceutical manipulation of the extract, seems to have irritant qualities; but this happens so rarely that I retain great confidence in the valuable curative properties of *grindelia*.

Many cases of acute eczema of the hands get well under the use of a saturated solution of boracic acid, and this application is particularly useful where there are numerous vesicular lesions inclining to coalesce and break down into eczema rubrum.

In such forms of the disease it is also that the old and tried calamine and zinc wash frequently proves efficacious. It is composed as follows:

R Pulv. calaminis præp., 3i;  
Pulv. zinci oxidi, 3i-3ii;  
Glycerinæ, 3iii;  
Aq. rosæ, 3iv.—M.

I have recently used with advantage a solution of sulphate of zinc in water:

R Zinci sulphat., 3ss;  
Aq.æ, Oi.—M.

This is by no means a new remedy, but is good enough to be kept in mind, especially in those acute but partly-developed cases where numerous incipient vesicles appear under the skin between the fingers and tending to spread over the back of the hand and wrist. It should be applied on cloths, which may be wetted every hour or so during the day and two or three times at night.

Among ointments, the "unguentum diachyli" of the Germans is the most valuable, when it can be had. It requires a skilled pharmacist to make it, and its preparation is very troublesome. When made very carefully it is extremely soothing; but if the olive oil which enters into its composition is not of the best, or if there should occur any carelessness in manipulation, it is very irritating. The following formula, to which my friend Dr. Duhring has called attention, is, I believe, the most satisfactory: one part of freshly precipitated (from acetate of lead) pure white hydro-oxide of lead is rubbed with two parts of water, and mixed well with six parts of the best Lucca olive oil. It should be stirred for about two hours over a hot-water bath near the boiling-point, and cooled with constant stirring until the proper consistence is obtained; while cooling, a drachm of oil of lavender to the half-pound of ointment is added.

The diachylon ointment thus prepared is to be spread thickly on rags and applied to the affected parts. It should never be rubbed in with the finger, because the same effect cannot be gotten from it when applied in this way.

Ointments of oleate of zinc or oleate of

bismuth may be of service in some cases of acute and subacute eczema. The ointment of oleate of bismuth is most conveniently prescribed according to the following formula :

R Bismuthi oxidi, 3i;  
Acidi oleici, 3i;  
Cerae albæ, 3iii;  
Vasellini, 3ix;  
Ol. rosæ, ℥ii.—M.

This very elegant pharmaceutical preparation was first suggested by Dr. McCall Anderson, several years ago, and it is a most useful remedy in eczema of whatever locality, but its action is particularly satisfactory in eczema of the hands.

Other ointments suitable in the subacute forms of eczema of the hands are the mild mercurial preparations. One which I have employed in many cases with most satisfactory result is the ointment of calomel and zinc :

R Hydrarg. chlor. mite, gr. x-xxx;  
Ung. zinci oxidi, 3i.—M.

Ointments of ammoniated mercury, and, in the more chronic forms of the disease, of the red oxide of mercury, may also at times be employed with advantage.

Eczema of the palms is usually of a chronic character, and the treatment quite different from that which has been described as appropriate to the disease as found on the backs of the hands or on the fingers. The disease is not likely to be mistaken for any other affection except the palmar syphiloderm. This, however, it does closely resemble in many instances. When signs of syphilitic disease exist elsewhere, or when the eruption runs up from the palm towards the wrist, some characteristic features of syphilis are apt to present themselves, so as to render the character of the palmar trouble unmistakable. But when we are forced to form an opinion from the eruption on the palm alone, this is sometimes quite difficult. Usually the lesions of eczema are characterized by diffuse irregular patches of thickened epidermis, with fissures here and there and jagged outlines. The syphilitic eruption, on the other hand, is characterized by deeper infiltration, with less epithelial thickening and scaliness. Moreover, the lesions, if carefully examined, will almost always be found made up of rounded patches, single or coalesced. It is, in fact, a papular eruption concealed by the thickness of the epiderm. Itching may or may not be

present in either case, and I do not know what other sign can be given as distinctive of the two affections when the palm alone is affected. Proper treatment quickly affects the syphilitic affection, while eczema of the palm is terribly intractable.

The diagnosis being made, however, we must remember that when eczema of the hands presents itself in the chronic forms so often met with, the treatment given as suitable for the acute and subacute varieties is useless and quite out of place. The remedies here required are, first, such as will soften and remove the redundant epidermis, and, second, those calculated to remove the infiltration of the cutaneous tissues.

Among the former, maceration by hot-water applications, and by rubber bandages and gloves, may be mentioned. The hands, or the palms alone, if these are the parts chiefly affected, may be soaked in water as hot as can be borne for some minutes before the stimulant applications to be described are applied. This softens the horny outside layers of the skin, and renders them infinitely more penetrable to various agents than they would otherwise be.

Rubber bandages, and especially rubber gloves, are to be highly recommended for the same purpose. They should be worn continuously for some days, being turned inside out and cleansed with cold water every day, while the hands are wiped on a dry towel. Under the use of the rubber, eczematous hands covered with horny epidermis become softened so as to permit the employment of ointments, which would be perfectly useless were they applied prematurely. The rubber applications themselves are only rarely curative. Though the disease may seem at times to have been entirely removed by their use, it quickly returns when they are removed. If it is borne in mind that the rubber applications are only preparative in their action, much disappointment will be avoided.

Alkalies in various forms are very efficient agents in macerating the epidermis. The saponis viridis, or "Hebra's green soap," a soft soap containing an excess of potash, is a very good preparatory application. It may be rubbed into the indurated patches with a bit of flannel, with the addition of a few drops of water, or it may in some cases be applied in the form of a poultice spread thinly on rags and kept in position until the epidermis becomes softened. Sometimes solutions of potassa—ten to

thirty grains to the ounce—may be used with good effect. If the weaker solution is employed, the patient himself may apply it with the aid of a rag or a stick, rubbing the solution into the affected parts until a feeling of warmth is produced, and then washing it off with pure water. The stronger solutions should be employed by the physician himself, and a good deal of friction may be used, care being taken to confine the action of the remedy to the indurated tissues. What is wanted is to soften the hard tissues; and the effect of the potassa may be heightened if the part affected is soaked for a little time in hot water to soften the tissues. The potassa then takes hold more rapidly.

Recently I have been using a solution of papain, a substance which exercises a sort of digestive influence on the epidermis, and which has served a good purpose in some cases of horny, indurated palmar eczema by preparing the way for other remedies. The following formula may be employed:

R Papain., gr. xii;  
Pulv. sodii bi-borat., gr. v;  
Aqua, 3ij.—M.

Paint on the part twice daily.

Having softened as far as possible the induration and callousness which are characteristic of chronic eczema of the palm, further applications may be made. Of those apt to be of use, the tarry and mercurial preparations are prominent. Tar ointments of various strength, containing from one drachm of tar to the ounce up to the official tar ointment of the Pharmacopœia, may be employed. Solutions containing tar, as the "Liquor picis alkalinus,"—

R Picis liquidæ,  
Potassæ causticæ, aa 3i;  
Aqua ad 3i.—M.,—

or the preparation known as "Liquor carbonis detergens," may be used in a diluted form, say beginning at one part to four of water, and gradually increasing the strength.

Another tarry preparation may be mentioned, the "Tinctura saponis cum pice;" it is made by dissolving tar and sapo molis, or "green soap," in alcohol, equal parts of each of the three ingredients being taken.

The application of this remedy may be followed by that of the unguentum diachyli above described. In fact, the fingers

and hands should always be wrapped up in ointments after the application of any of the remedies of a tarry and caustic character, or of those intended to macerate the epidermis. A good ointment to use after these washes is the following:

R Hydrarg. ammoniat., gr. v;  
Zinci oxidi, 3iii;  
Ung. picis U.S.P., 3iv;  
Ung. aq. rosæ, 3vii;  
Vasellini, 3iss.—M.

Rags or narrow bandages should be smeared thickly with this ointment, which is to be kept in contact with the skin continuously, being removed only when the tarry and caustic applications are made, or when used alone the ointment may be simply wiped off every evening, and a new application may be made immediately.

Two other forms of treatment remain to be described,—blistering and the application of plasters. The former plan is chiefly to be put in practice when the eruption is situated on the backs of the hands or on the fingers; it is performed by simply painting the parts with cantharidal collodion, and dressing the blister with one of the milder ointments. The other procedure is occasionally of use in cases where the palmar surface is thickly covered with dry horny epidermis. It consists in keeping the following ointment applied on narrow strips of muslin constantly in apposition to the surface:

R Hydrargyri vivi, gr. c;  
Terebinthinæ, gr. c;  
Emplast. plumbi, gr. ccl;  
Resinæ pini, gr. l.—M.

This should be kept in contact day and night for a considerable period. As it is very tenacious, it rarely requires to be changed.

Finally, the fissures which occasionally occur in eczema, particularly about the fingers, are to be treated by long-continued soaking in hot water, followed by the application of a fine pencil of nitrate of silver in each fissure, and then wrapping up in one of the ointments described.

Constitutional treatment is rarely of use in chronic eczema of the fingers, though arsenic is occasionally found to do good. The acute varieties of eczema are to be treated like the same disease elsewhere. In any case a chronic affection, the prognosis of eczema of the hands should always be guarded. Some cases resist all treatment stubbornly.

## ORIGINAL COMMUNICATIONS.

## SOME CONTRIBUTIONS TO THE HISTOLOGY OF PHTHISIS.\*

BY WILLIAM H. MERCUR, M.D.

THE object of this investigation, which is limited entirely to the morphology of phthisis, has been to ascertain, as far as possible, by means of histological studies, the exact character of the lesions peculiar to phthisis of the lungs.

It is true that no direct proof of the process of the disease can be obtained by histological research; but from a careful study of phthisis in all its stages many correct and important inferences may be drawn, particularly now that the laws of cell activity in its progressive and retrogressive changes are so well established by experimental pathology and histology.

This is, then, a mere record of personal observation, based upon studies made thus far. I have found it most convenient and useful to study the specimens by myself and draw my own independent inferences in regard to the various histological points which presented themselves, leaving the careful study of the immense literature bearing on the subject until I had come myself to somewhat definite conclusions.

This course was one rather of necessity than choice, as the works on the histology of phthisis which came under my notice were so contradictory in character that I had no alternative but to pursue an independent research. It is hardly necessary to add that this investigation was not begun without some previous knowledge of the subject, as for two years past I have made a thorough study of the lungs, both in health and disease.

As will be seen by referring to my original manuscript,† I was fortunate enough to secure a large number of lungs from persons dying of phthisis. My endeavor has been to bring the histological changes as far as possible into correspondence with the naked-eye appearances. In this latter regard much discrepancy exists, and suppositions and inferences drawn from the

naked-eye appearance alone are often not at all borne out and confirmed by the microscopic section.

I would like to acknowledge my indebtedness for the extensive facilities offered by the University of Pennsylvania to those undertaking pathological or histological researches, and particularly to my friend Dr. H. F. Formad, for his encouragement and valuable guidance in all matters pertaining to pathological investigation. I also wish to thank Dr. J. W. Blackburn for the beautiful and accurate drawings he has furnished me.

## CHAPTER I.

## GENERAL SUMMARY OF THE HISTOLOGY OF PHTHISIS, DEDUCED FROM THE MICROSCOPICAL STUDY OF CASES.‡

What is phthisis? All modern scientific pathological morphologists seem now to concede that phthisis is "*a local tuberculous inflammation of the lung.*"

Having defined this point, the question naturally arises, What is a tuberculous inflammation, and how does it differ from ordinary inflammation? This is defined by the products.

Simple inflammation has its limited course, and terminates in absolute rapid destruction of the tissue affected, in perfect healing, or in the production of a definite connective-tissue hyperplasia.

Tuberculous inflammation is unlimited and never heals, unless converted into a simple inflammation. Histologically the products of a tuberculous inflammation only differ from those of simple inflammation in the well-known tendency to form nodes and to undergo cheesy change. This peculiarity of tuberculous inflammation is common to other specific inflammations. If such a tuberculous inflammation occurs in the lungs, it is designated "*phthisis pulmonum.*"

This tuberculous inflammation leads like any other inflammation to secondary catarrhal changes, the latter being more prominent in tuberculous inflammation, thereby leading to the identification of catarrhal pneumonia with phthisis.

We next ask ourselves, What is a tubercle? A tubercle may be defined to be "*the*

\* An abstract from an inaugural thesis, to which the Henry C. Lea prize was awarded at the Commencement of the Medical Department of the University of Pennsylvania, 1883.

† The bulk of this research, containing the histories of the individual cases, and the detailed microscopical description of sections from which these conclusions were drawn, are embodied in my original manuscript, deposited in the Stillé Library of the University of Pennsylvania.

‡ The following observations refer exclusively to the lesions in consumptive lungs, and not to tuberculosis elsewhere, as the scope of this investigation will not permit a description of systemic lesions.

*anatomical expression of a tuberculous inflammation."*

In regard to the use of the designation "miliary tubercle," the word "miliary" should not be used as a histological criterion, but ought rather to designate the expression of a general disease, or the products of that disease. In this essay, therefore, the word is used only in this sense. It must be conceded that the formation of tubercles in the lung is entirely different from the formation of true miliary tubercles elsewhere; hence why not limit the term "miliary" to the small nodes found in "general miliary tuberculosis," and simply designate the products of the tuberculous inflammation in the lung as tubercles? Of course the foregoing does not exclude the occurrence of secondary true miliary tubercles complicating the phthisis.

## CHAPTER II.

### HISTOLOGY OF ACUTE PHTHISIS.\*

Lungs taken from acute cases of phthisis show distinct signs of acute lobar pneumonia, in addition to more or less advanced tubercular changes. In the cases examined, both lungs, or sometimes only one, showed perfect typical hepatization in the lower lobes, while at the apices and in the middle lobes the usual tuberculized products—*i.e.*, softening, cheesy masses and cavities—were seen. The latter were of moderate size, few or numerous, and filled with a somewhat purulent, semi-liquid material. Marked congestion and occasional hemorrhagic infarcts were observed. No two cases, however, were alike. A similar condition was observed in cases supposed to be chronic, where the croupous condition hastened the lethal result. The preceding refers to the naked-eye appearance, and certainly indicates a complication of croupous pneumonia. The microscopical examination convinced me that the condition mentioned is really a croupous pneumonia, complicating the phthisical process, and that invariably in acute and generally in chronic phthisis this pneumonia hastens the lethal result.

The histological appearances, as seen in sections made from lungs of acute phthisis, are as follows. In the section taken from the apex, where the destruction was prom-

inent, tuberculization of the alveolar septa, catarrhal exudate, and cheesy degeneration of both are conspicuous. The vesicular walls, wherever intact, are thickened by infiltration of lymphoid cells, and well-developed tubercle-tissue is seen around the bronchioles and blood-vessels, and also within the lumen of the same. Giant cells are very scarce. In the portions of the lungs which are hepatized, the same changes are seen, but in a less advanced stage. The greater portion of the air-vesicles are, moreover, seen filled with an exudate composed of lymphoid cells, fibrin, and blood, with the definite character of a croupous pneumonia. This croupous exudate fills the air-vesicles of a whole lobe uniformly, just as in typical lobar pneumonia, and does not limit itself to individual acini, nor leave numbers of air-vesicles unfilled, as in catarrhal affections of the lung.

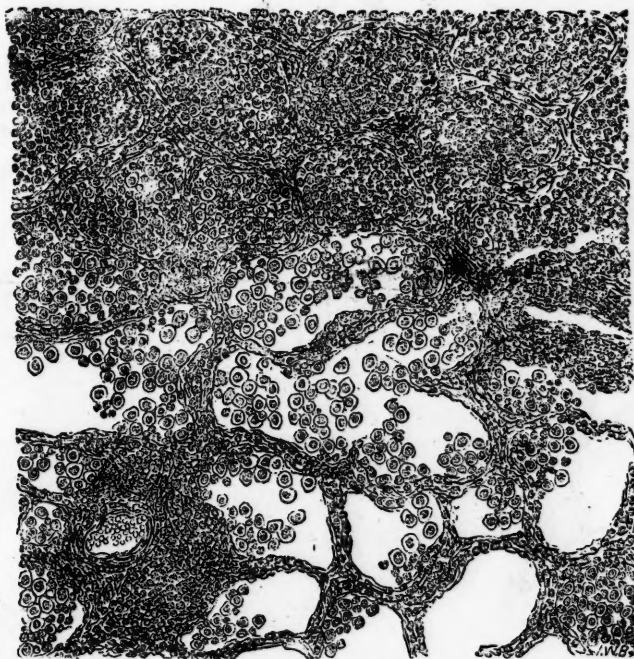
Thus we find in the histological picture a direct corroboration of the naked-eye appearance. These conditions do not seem accidental. They are seen in specimens prepared from many cases, and the naked-eye appearance of all lungs of acute or suddenly terminating cases of phthisis which I have seen in the Philadelphia Hospital, and elsewhere, was identically the same.

Cheesy changes were rare or totally absent in these cases. Tissue-destruction went on apparently by suppurative, liquefying changes; and even this was by no means a prominent feature. The drawing on the opposite page (Fig. 1) shows the croupous condition described.

Some cases of acute phthisis show a rather pleurogenic origin of the disease. In one case in particular there was decided chronic tubercular pleurisy and a distinct infiltration of tubercle-tissue which extended from the pleura inwards into the lung-parenchyma. Fibroid changes were also observed in this case, although not prominently. The absence of giant cells and of cheesy changes was particularly conspicuous. The lower lobes of the lungs showed extensive croupous pneumonia, confirmed by microscopical examination. Another interesting feature, which will again be alluded to in discussing chronic phthisis, is the white, irregular patches, resembling tubercle-nodes. They are scattered all over the lungs, and, as a rule, are called miliary tubercles. The drawing on

\* See appendix of original manuscript for details.

FIG. 1.



ACUTE PHTHISIS.—Upper part shows air-vesicles filled with croupous exudate, which consists of lymphoid cells and fibrin. Lower part shows the catarrhal exudate in the air-vesicles. In some places the alveoli show coal-dust.  $\times 200$ .

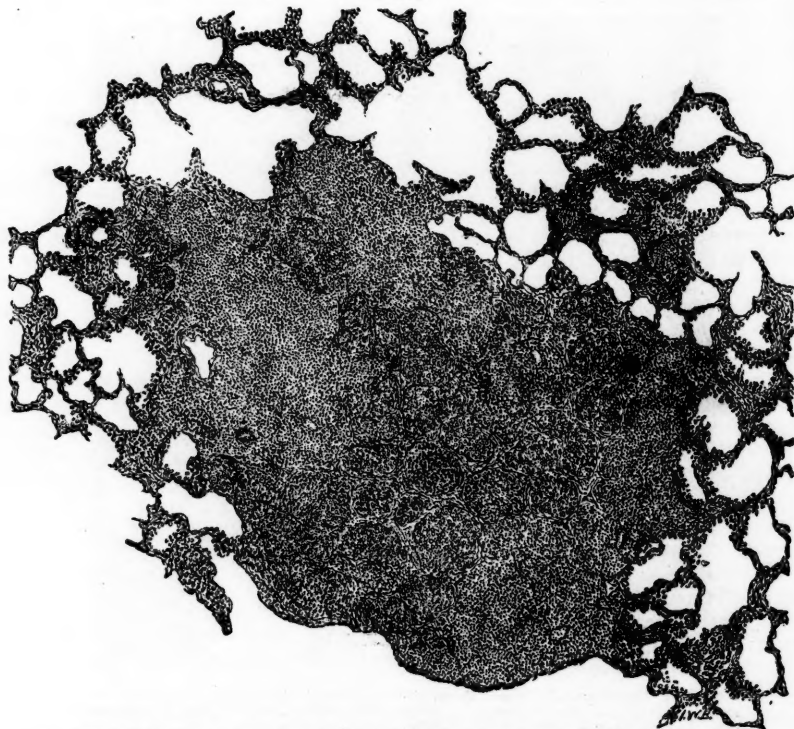
page 712 (Fig. 2) shows a section of one of these nodes, taken from the apex, where they are more conspicuous on account of the less extensive croupous changes. Immense numbers of these nodes are seen in the parenchyma of every phthisical lung. They are, however, not true tubercles, and least of all "miliary" tubercles, as it has been the custom to call them. It will be seen from the illustration, which is a camera-lucida drawing, executed, like the other cuts, by an accomplished artist and microscopist, that the air-vesicles of a given area are filled with catarrhal exudate, while only in the periphery of the node tubercle-granulations are seen. That this is actually the case is evident from the faint outlines of air-vesicles which can be seen within the node. It is also certain that these are air-vesicles, and not submiliary nodes, from their similarity and uniform size, corresponding as they do exactly to the air-vesicles outside the node. By the use of reagents and by brushing, nearly the whole node may be transformed into a batch of naked and empty air-vesicles,

which form a single lung-acinus.\* I would like to lay stress upon this latter point,—viz., that these nodes or masses are blocked-up lung-acini. They correspond to the latter in shape and size, and are just as uniform in character as lung-acini themselves. Fig. 2, already referred to, shows one of these acini with blocked-up air-vesicles.

From the foregoing, as well as from the detailed microscopical descriptions,† it seems reasonable to infer that the tuberculous process begins primarily within the smallest bronchioles within the air-vesicles, and also, though less frequently, in the infundibula of an individual lung-acinus. In regard to this formation, my specimens show distinctly that *first of all* an exudate is thrown out, consisting of lymphoid cells, which are probably white blood-corpuscles. The exudate is aided by proliferation of the sub-epithelial con-

\* An excellent diagrammatic illustration of a lung-acinus will be found in Rindfleisch's "Handbuch der Pathologie," p. 349, fig. 134.  
† See original MSS.

FIG. 2.



GRANULATION-TUBERCLE, SIMULATING MILITARY TUBERCLE.—Section through a node (of size of pin's head) from a phthisical lung. The main bulk of the node is made up of air-vesicles (well seen in centre) filled with exudate; at the periphery of the node some massive tubercle-granulations, with giant cells, are seen.  $\times 30$ .

nective-tissue cells; it is seen in some places partly organized, in others completely transformed into perfect tubercle-tissue, which ultimately obliterates the lumen of the bronchioles. A beautiful illustration of this total obliteration of a bronchus is seen in the drawing on the opposite page (Fig. 3).

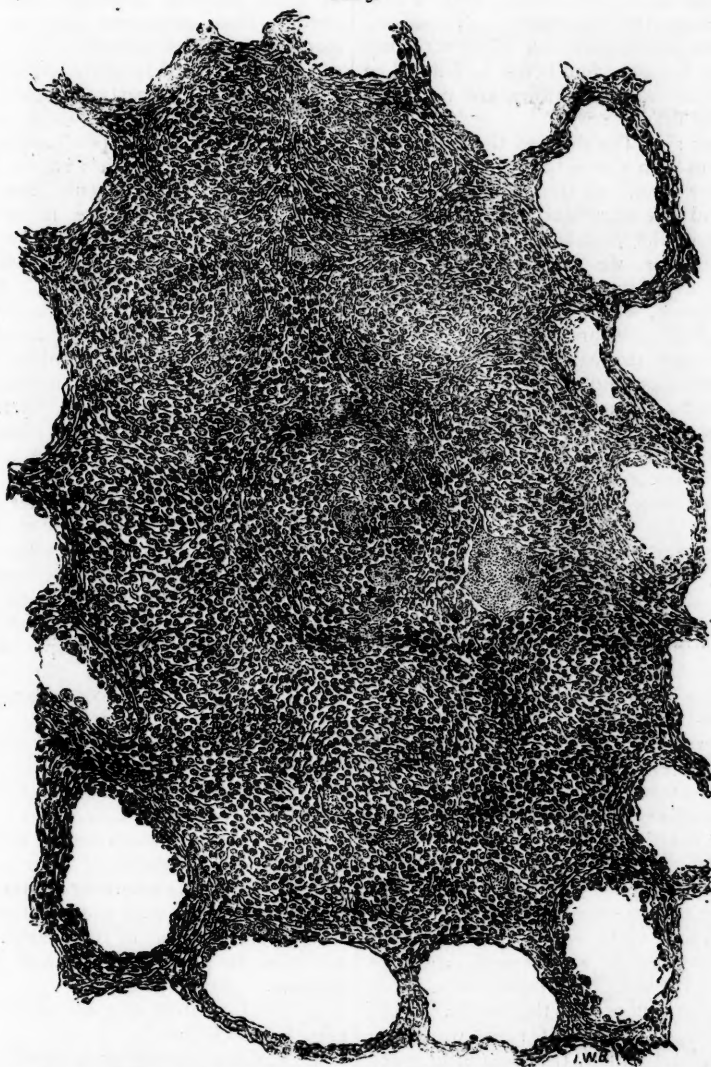
Simultaneously with this intra-bronchial tuberculization and organization, tubercle-granulations appear around the bronchiole, associated with diffused true tubercle-tissue. This process spreads sooner or later along the bronchus and also into the infundibulum, attacking from here the air-vesicles which compose the acinus and which communicate by means of the infundibulum with the affected bronchus. The process may also begin primarily within the air-vesicles, in a similar manner as described above for a bronchus. It is distinctly seen that the tubercle-tissue within them is due pre-eminently to an organization of the exudate (see obliteration of the air-vesicles by organized tubercle-tissue

in Fig. 3), and not to a thickening and hyperplasia of the alveolar walls, as described by Green.

The changes in the blood-vessels, seen from my preparations to be only secondary, are not noticed until tuberculization in the bronchi and air-vesicles is far advanced. They consist of a lymphoid infiltrate of the adventitia and of the perivascular spaces, leaving the lumen, in cases of acute phthisis, perfectly patulous.

Green's views on the histology of tuberculous products, in his "Introduction to Pathological and Morbid Anatomy," 1881, may be summed up as follows. He considers in many instances that intervalveolar products enter largely into the formation of tubercle, but that these products are made up of epithelial cells and small cells resembling leucocytes; also that tubercle thus formed undergoes cheesy softening; that in some cases the air-vesicles contain giant cells, which, according to Dr. Klein, originate from the

FIG. 3.



**TUBERCLE-NODE.**—Showing a bronchiole completely obliterated by organized tubercle-tissue. It owes its origin to the organization of the exudate within the air-vesicles and the lumen of a bronchiole. The latter is indicated by a ring of coal-dust. It will further be seen that upon the size and outlines of an individual acinus depend the size and shape of a tubercle-node. The outlines of the air-vesicles can be seen by careful focusing. Giant cells also seen.  $\times 100$ .

epithelial lining of the same. The more permanent tubercles are formed from an overgrowth and extensive thickening of the alveolar walls, obliterating the lumen, in which finally only some giant cells remain. By thus advocating an extra- rather than an intra-alveolar formation of tubercle-tissue, Green does not seem to admit organization of the exudate proper.

An illustration of this method of the formation of tubercle-tissue is seen in his book, p. 236, Fig. 88.

Dr. Delafield's "Studies in Pathological Anatomy," 1882, is an admirable work, to which I only had access after the completion of my studies last summer. He gives, as the result of his investigation, some interesting observations in regard to the or-

ganization of a new tissue, both within and without the air-vesicles. These observations correspond so closely to my own that I quote them below in full. The changes in the bronchioles are not mentioned by him.

Page 97: "The diffused tissue presents itself to us with a structure varying according to the length of time which it has existed, and to understand it we must study both its earlier and later stages. In the earlier stages we have to distinguish between a production of interstitial connective tissue, with obliteration of the air-vesicles from pressure, and a growth of a peculiar new tissue within the cavity of the air-vesicles, and in their walls. This interstitial connective tissue is produced in the walls of the air-vesicles, the bronchi, and the blood-vessels,—the whole process being essentially an extra-alveolar one,—the vesicles suffering chiefly from pressure.

"The growth of the tubercle-tissue is different. The process is both an extra- and an inter-alveolar one. The solidification of the lung-tissue is accomplished by the formation of new tissue, both in the walls of the air-vesicles and within their cavities.

"In the walls of the air-vesicles there is a growth of round and polygonal cells and intercellular basement-membrane, or the cells are formed in excess, and the basement-membrane is split up so that the natural outlines of the vesicle are lost.

"The cavities of the vesicles are filled in two ways. Some are partly or completely filled with polypoid outgrowths from their walls; in others, there is a mass of round and polypoid cells, with or without giant cells, embedded in a basement-substance formed in the cavities of the vesicles, but at first not continuous with their walls. If the air-vesicles, in either of these ways, are not completely filled, the remaining space may be occupied by epithelial cells. . . . These two processes—the growth of interstitial connective tissue, and the growth of tubercle-tissue, in the walls and in the cavities of the air-vesicles—are usually associated."

### CHAPTER III.

#### HISTOLOGY OF CHRONIC PHTHISIS.

The origin of chronic phthisis does not seem to be altogether identical with that

of acute phthisis, although some of the chronic cases examined give the impression that the changes are a continuation of those described in acute phthisis.

Here again it is nearly impossible to give a collective description, each case having certain individual peculiarities. The study of chronic phthisis is also less satisfactory than that of acute, because the pathological processes are more difficult to trace, and the picture of the structural changes, on account of their more remote origin, is harder to interpret. Again, it is not justifiable to draw inferences from the examination of the lung-tissue in any given case of chronic phthisis, because two-thirds of it are not accessible for study, having been destroyed by the pathological process, so that they present only vacant spaces (cavities), or pulpified, structureless, cheesy masses.

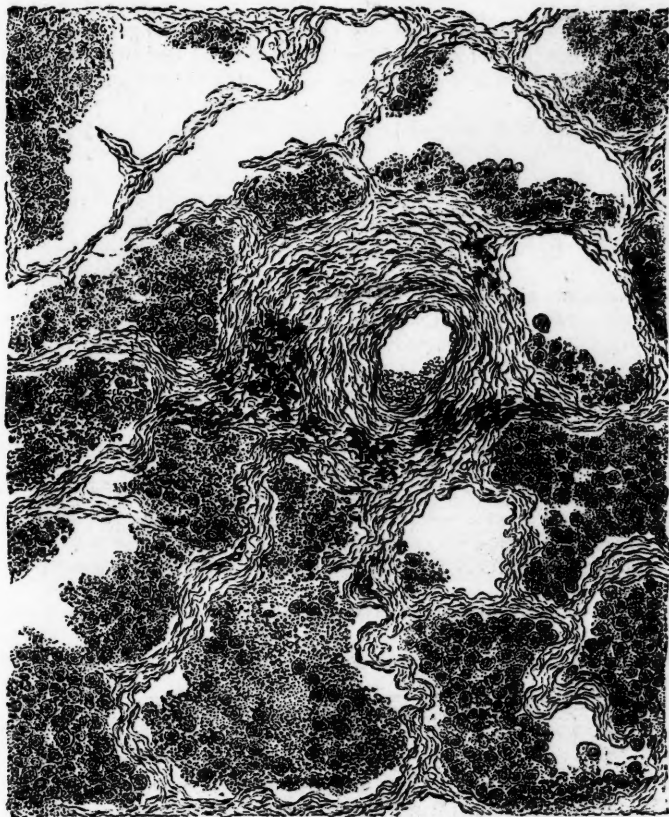
We can, therefore, only infer vaguely what preceded these last-named changes. Still, the morbid process can sometimes be traced, and in these cases I endeavored to give as accurate a description\* as possible of the morphology of the remnants of lung-tissue available for microscopic section.

The lungs in chronic phthisis differ morphologically from those in acute phthisis in the following particulars:

1. Fibroid changes are more marked.
2. The blood-vessels are decidedly implicated in the process, and the veins are invariably congested.
3. The vesicular walls are less infiltrated, are invariably denuded of their epithelial lining, appear thin wherever not implicated in tubercle-tissue, and show distinctly the yellow, elastic tissue of their walls. They are more frequently empty than in acute phthisis. (See Fig. 4.)
4. The formation of giant cells is a very conspicuous feature.
5. Mucoid change goes hand in hand with cheesy degeneration, occasionally well marked, while in acute phthisis purulent fatty degeneration appears the means of tissue-destruction.
6. The contents of the air-vesicles appear very much macerated, and the cells undergo decided retrograde changes, showing numerous compound granule-cells and molecular debris.
7. Large areas of lung-structure are frequently unaffected.

\* See original MSS.

FIG. 4.



CHRONIC PHTHISIS.—Showing the vesicular walls devoid of infiltration, and the catarrhal exudate mostly in a state of retrograde change. Fibroid thickening and pigmentation seen around a blood-vessel.  $\times 200$ .

8. A distinct connective-tissue capsule is frequently observed around a tuberculized acinus.

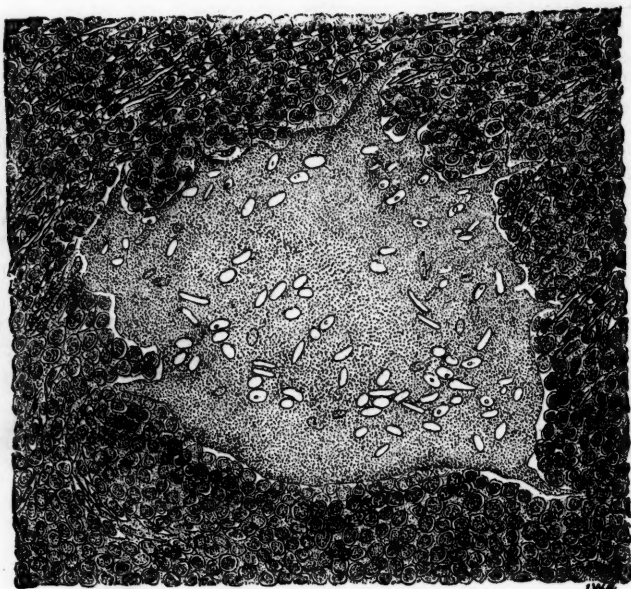
The mode of tuberculization of lung-tissue in chronic phthisis is identical with that described in acute, excepting that the process in the former is more advanced, both progressively and retrogressively. Recently tuberculized tissue, advanced fibroid changes, and areas of cheesy degeneration and unaltered lung-tissue, alternate in a very marked manner. The latter is not observed in acute phthisis, where the process is more uniform.

Air-vesicles are occasionally seen, filled with croupous exudate; and it would appear that even in chronic phthisis the complication of a croupous pneumonia is one of the factors inducing the lethal result.

The tuberculized nodes described already in connection with acute phthisis may also be present here, either in moderate quantities, or thickly scattered throughout the lung, according to the number of individual acini affected. (See Fig. 2.) The independence of the process of tuberculization in each individual acinus is well seen in the sections from which the last-mentioned drawing was made. Each tuberculized bronchiole seems also to act as an exciting factor in the implication of the acinus emptying into it. In chronic phthisis the bronchioles are occasionally filled with cheesy, degenerated, catarrhal exudate, or indifferent debris. An obliterating endo-arteritis of the blood-vessels is quite a common occurrence.

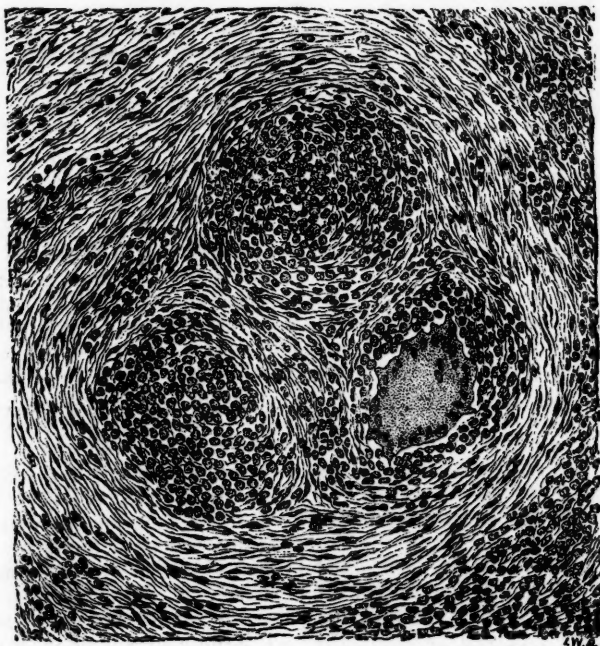
Giant cells, rare in acute phthisis, are frequently present in enormous numbers in

FIG. 5.



GIANT CELL IN GRANULATION-TUBERCLE.—Showing spider-like appearance.

FIG. 6.

MILIARY TUBERCLE.—Showing fibroid change and submilium tubercles.  $\times 200$ .—*Formad's Manual of Microscopic Diagnosis.*

the chronic form of the disease. Occasionally they are of enormous size, and exhibit a peculiar, spider-like appearance, never observed in tubercle elsewhere. In Fig. 5, one of the above-described cells is beautifully seen.

In order to show the strong contrast between true submiliary nodules and the false or apparent ones described in this paper, I introduce here (see Fig. 6), through the kindness of Dr. H. F. Formad, a drawing taken from his "Manual of Microscopic Diagnosis," showing a true miliary tubercle, containing three submiliary nodes. Compare Fig. 3 with Fig. 6.

### OBSERVATIONS ON CARIES OF THE MASTOID PROCESS, OF THE TEMPORAL BONE, IN CHILDREN.

*Read before the Philadelphia County Medical Society,  
April 13, 1883.*

BY LAURENCE TURNBULL, M.D.,

Aural Surgeon to Jefferson Medical College Hospital, Philadelphia.

**I**N the new-born infant at full term, the mastoid cells are situated behind the tympanic cavity, and are in their rudimentary state represented, as I show you in this skull, by this small tubercle and the horizontal portion. In front you see this ring of bone which holds the membrana tympani, and, inside of this, the bones of the ear. The extension of this horizontal portion backwards and downwards at a later period, as in the young boy's or girl's temporal bone, forms the cavity of the mastoid process, smaller, but as well formed as in the adult.

If a vertical section be made so as to pass through this horizontal portion of the temporal bone of the boy of four years of age, these mastoid cells will be found to be bounded externally by a part of the squamous bone, which is superior and posterior to the meatus externus; and it is often this part which becomes affected in cases of diseases of the mastoid cells in early life. Towards the front, the mastoid cells are therefore immediately covered by the posterior wall of the osseous meatus. Caries of the latter often extends to this wall, and the necrosed cells are cast out through the external meatus, as in the specimen which I show you, which gives a view of the smooth surface of the meatus, the upper surface containing the dis-

eased cells. At other times, the destructive process is observed to spread from the external meatus towards the mastoid cells, and are removed by cutting through the skin, muscles, and tissue over the external surface of the temporal bone and mastoid process. In these three specimens which I show you, they were all removed from the upper portion of the mastoid process. In every instance they were the result of scarlet fever in boys of three, four, and five years; and here I may state that although this fever is the chief cause of the diseased condition of the bone in children, yet we have it follow measles, smallpox, scrofula, tuberculosis, rickets, syphilis, and cancer. This latter form is more rare. The notes of a recent case will, I trust, be of interest. I will report it at the conclusion of this paper, and will now dwell for a few moments on the

### DIAGNOSIS OF CARIES OF THE TEMPORAL BONE.

Caries is a decay of the bone, or, in other words, a corrosion or erosion on a portion of it, brought about by the contact of some destructive agent. It differs from necrosis, or absolute death of a bone. In caries the surface may only be diseased, and the removal of this effects a cure: at other times, the deeper portions are so affected that nothing but the death or removal of the bone will relieve the patient. In the bones of the ear, especially the mastoid process of the temporal, it is almost always attended with a discharge from the external meatus, termed "otitis media purulenta," and where the bone is affected, there is a swelling of the auditory canal. The discharge has usually a peculiar odor, with sanious or meat-like washings of the suppuration. If a preparation of lead, as a wash, is employed, it will blacken it. By means of the microscope we can often corroborate the fact of the bone being diseased, when not seen by the discovery of elastic fibres or bone-cells in the discharge. The best means to discover the condition will be the use of the speculum and forehead mirror, throwing a good light into the meatus, with the careful and gentle use of the probe, which will serve to detect a loose bone, or bone which has become soft and can be moved by the probe. It must be borne in mind that the floor of the tympanum has a rough feeling, not unlike that of

caries, when touched with the probe, even when the bone is not diseased.

The dangers from careless probing are as follows: destruction of the membrana tympani, dislocation of the ossicula,—for, as a rule, in such cases, the articulations are already relaxed,—or by a disarticulation of the stapes—which is generally very loose in the fenestra ovalis—pus may escape into the cavity of the labyrinth, and the expansion of the auditory nerve may be destroyed, or openings may be made into the cranium.

In many of the cases in which I have operated, either a fistula was already present, or the soft parts had to be cut through by an incision at the insertion of the auricle, being careful not to cut forward, for fear of loosening the posterior wall of the external auditory meatus, or reach the membrana tympani. If there is an opening in the bone, it should be enlarged with the sharp spoon.

In other cases, I had, at times, to employ the chisel in order to enlarge the small openings. The granulations lying in front are to be removed with the sharp spoon. If the antrum is opened and laid bare in this way, it can be examined most carefully with the probe, or the tip of the finger introduced. If loosened sequestra are present, they can be seized with the pincers or forceps and extracted, or, as proves most suitable, may be pried out or divided by the bone-forceps. The sharp spoon also offers the best services in removing the bone that has become softened by caries. Use it only when the bone is found to be softened to a certain degree: there are some sequestra that cannot be reached, as in case shown in this drawing. In the after-treatment, keep the wound open by a thick drainage-tube, or tent, so that in the subsequent days we may have a full view into the depths of the wound, from which now the sequestra, gradually loosening themselves, may be detached with the probe, and removed, packing around it powdered boracic acid until we are sure that the mastoid process is in a sound condition. The important point in the after-treatment is the regular removal of the accumulated secretion; for which purpose we prefer syringing at first with antiseptic solutions of permanganate of potassium, boracic acid, or sulphurous acid, or chloride of soda; later with neutral, and lastly with astringent fluids, but

nothing that will have a tendency to leave a deposit, as iron, lead, or insoluble powders.

*Case of Encephaloid Cancer, involving the Temporal Bone, Mastoid Cells, and Antrum, showing itself first in the external osseous auditory meatus as a polypoid growth from diseased bone. Removed three times, yet reappearing.*—Walter G., aged 4 years, residence, New Jersey, was sent me by the physician, with a desire that I should remove the mucoid polyp filling up the meatus, with the following history: "The abnormal growth in the ear of Walter G. began to develop some time in January, 1883, and about the 7th of March I removed it by torsion and touched the pedicle with cupri sulph. Soon after, the abscess in the mastoid process, behind the ear, made its appearance, as also did the redevelopment of the mucoid which you removed, followed by a sympathetic abscess of the 'Antrum of Highmore.' Regarding the case as one of a serious character, as well as one of interest, I have referred the matter to you for further and more experienced treatment."

Walter G., a bright, well-nourished, and healthy-looking boy, was received, with his mother, into Jefferson Medical College Hospital, April 16 (having made two visits to the Aural Department under my supervision, April 12 and 13). I found the following changes in his condition, from his previous visits: first, the evidence of the rapid growth of the polypoid mass, which had been removed from the auditory canal; second, the abscess at the base of the mastoid cells was filled up, and appeared bluish red, and very much swollen, involving the sterno-cleido-mastoid muscle; third, the so-called abscess in the antrum was a hard swelling of the face and upper jaw, and pressing upon the eye. When the little patient was placed under the influence of ether, a probe was introduced alongside the mass of granulations to the temporal bone in front, which was found rough, softened, and diseased; and when re-introduced and passed backwards into the mastoid process, a similar condition was noticed. To determine the condition of the antrum, an exploring-needle was passed into the swelling, under the lip, and also alongside of the tooth, but no pus was found. To be sure of this swelling, the first molar tooth was removed (all the teeth were sound), and a drill was introduced through the bone into the tumor, and nothing but grumous blood followed. A solution of carbolic acid and tepid water was then injected into the tumor, and with considerable force was returned through the nose, but no pus was found in it, only colored by the blood. This examination confirmed the diagnosis of its being a case of malignant disease. We proposed to the mother the removal of the

diseased bone with a portion of the jaw, but she stated she would rather see him dead. Three of our colleagues saw the patient with us, and all agreed in the diagnosis which I had made.

The child died two months later, of exhaustion following spontaneous hemorrhages from the fungoid mass which sprang from the external auditory meatus. No post-mortem was allowed.

### A SIMPLE FORM OF NASAL DOUCHE.

*Presented at a Meeting of the Philadelphia County Medical Society, held April 18, 1883,*

BY FRANK WOODBURY, M.D.

**GENTLEMEN:** I will ask your indulgence for a few moments, in order to exhibit a portable, efficient, and economical form of nasal douche which I devised some time ago, and have used for over a year in place of all other forms of douche with complete satisfaction. I do not claim novelty as to principle, because the siphon is nothing new, but bring it before the Society merely because of its cheapness and simplicity.

The douche consists of an  $\Gamma$ -shaped elbow of glass tube, to which is attached a short (about three inches) piece of ordinary rubber tubing on one arm, and a long (twenty inches) piece from the other, the latter having a hollow, somewhat conical, glass nozzle, so as to occlude the nostril when pressed into it, and keep in the fluid delivered through a central opening. The short end is also tipped with a glass tube so as to hold it open and prevent collapsing. When not in use the entire apparatus is contained in a small paper box ( $2\frac{1}{4} \times 1\frac{1}{4} \times 1$  inch), which may be conveniently carried in the pocket, or may be carried in a valise without breaking. In order to use the douche, a glass tumbler, or any similar receptacle, should have placed in it the required amount of warm water ( $100^{\circ}$  F.), medicated as desired; the douche should be immersed in the fluid, and then the long tube (tightly pinched between the fingers so as to retain its contents) is drawn out of the reservoir until the glass elbow hooks over the edge of the cup, where it is self-retaining; the fluid will flow from the nozzle as long as it is depressed below the level of that in the receiver. The flow can be interrupted by simply dropping the nozzle back into the tumbler. It fulfils perfectly the purposes of a nasal douche, where such an instru-

ment is desired. The douche may also be used for acute affections of the ear (after scarlet fever, etc.), for the eye, and generally for such purposes as an instrument of this size is adapted; among these may be mentioned the administration of milk, broth, etc., to patients unable to sit up, and too weak to drink in the ordinary way.

The advantages of this form of nasal douche are (1) its simplicity, there being no parts that can rust or get out of order; if any portion is broken it can be replaced at a trifling cost; (2) its convenience, being compact in form, occupying little space, taking but a moment to put into operation; (3) its safety, the stream being delivered without force, simply by gravity; it is almost impossible that the fluid should be forced into the middle ear; and (4) its efficiency being granted, its chief advantage is that it is the most economical douche that is in the market, its cost being insignificant.

In common with every one engaged in general practice, I have found patients for whom a nasal douche might be useful for a short time, but the comparative expensiveness of the Thudichum's douche, and its danger of breakage, have often made me hesitate before ordering it. On this account I devised the simple form which I have presented to-night. Any one can make one for himself in a few minutes at a cost of about twenty-five cents. The rubber tubing costs ten cents per foot, and the glass a trifle only. Having given it to Mr. Hayes, of the St. George Pharmacy, with the request that they should be made and sold at this price (twenty-five cents)



to patients, he very kindly consented; so that if any one does not wish to take the trouble of making the douche, he can get it by sending this amount to Mr. Hayes, Broad and Walnut Streets, Philadelphia.

Unlike other nasal douches, this can be sent by mail.

In conclusion, I would also invite the attention of the Society to the employment of gelatin capsules for the dispensing and dosage of remedies used in making the solutions; as these capsules are closely fitted, deliquescent salts may be very conveniently dispensed in them, each one containing sufficient for making the desired amount of solution for use at one time. I have here some gelatin capsules containing twenty to thirty grains of phosphate of sodium, chloride of sodium, etc., which may be passed around for inspection.

### THE RADICAL CURE OF VARICOCELE BY EXCISION OF THE VENOUS PLEXUS, ILLUSTRATED BY THREE CASES.

BY H. C. BOENNING, M.D.

FOR the radical cure of varicocele I have recently performed an operation, which in three cases has resulted in a speedy, complete cure, and which, if properly done, is superior to the ordinary operation,—because, first, it is *simple, easily performed*, and the parts under the sense of *sight*, as well as feeling; second, it is invariably successful; third, the free drainage prevents absorption of pus or other discharges. It is well known that as the result of the so-called subcutaneous ligation (intra-scrotal) of the veins, gangrene of the testicle, abscess, sloughs, and pyæmia have occurred, with in some cases a fatal result. Free drainage is an acknowledged important factor for the prevention of blood-poisoning, and is as necessary in the operation for the cure of varicocele as in any other wound. In the ordinary varicocele-operations, also, the sense of feeling is entirely and alone relied upon; it is undeniable that frequently puncture of the veins, or incomplete ligation of the veins, occurs, resulting in complications interfering with the obliteration of the varicocele; further, in some cases the varicocele through collateral circulation returns a few weeks after the so-called radical operation.

The operation of excision is performed as follows:

The parts are shaved; the patient is anesthetized; an incision is then made through the anterior portion of the scrotum about three-

fourths of an inch to the left of the raphé, and about two inches in length, from near the lower portion of the scrotum up; the tissues are divided, layer after layer, upon a director, until the cord, veins, and testicle are exposed; the vas deferens is carefully drawn over to the right; the veins are isolated, separated, and an aneurism-needle is passed, armed with a strong catgut or waxed-silk double ligature; the veins are then ligated above and below, the ligatures being placed half an inch or more apart; the veins are then divided midway between the ligatures, as is the thyroid gland in tracheotomy, and the stumps of veins beyond the ligatures are retrenched, if necessary, by the scissors. All the veins, however, should not be ligated; *one or two should be left to return the blood supplied by the arteries of the cord*. The general inference that the veins of the cord are sufficient to carry off the venous blood is incorrect; and, hence, to assist the circulation the above plan should be adopted, lest gangrene ensue, or a chronic congestion of the testicle. After the veins have been ligated, divided, and retrenched, the parts should be carefully cleansed, as is the peritoneum after abdominal section, and returned to their places; the ligatures, cut about four inches long, drawn out of the sac at the lower portion, and sutures applied from above downward; three silver wires should be deeply passed *through* the lips of the wound, so as to catch the visceral layer of the tunica vaginalis, leaving a lower aperture of half an inch in length for drainage.

The parts should be supported either by the scrotal support (see *College and Clinical Record*, vol. ii. page 264) or towels or oakum. The dressings should be light,—carbolic oil, salicylated cotton, lead-water, and laudanum; or a poultice when indicated: the latter will do good service from about the seventh to the twelfth day. Internally, good nourishment, quinine, or, if fever arises, an aconite fever-mixture, is indicated.

From about the third day very mild warm injections may be used to advantage: thus, one part of carbolic acid to a hundred of water, ten grains of permanganate of potassium to a quart of water, etc., at about ninety-five degrees of heat, should be daily employed in washing out the sac. If the drainage-opening show a tendency to close, a small piece of oiled lint may be passed between the lips of the wound. After the tenth day gentle traction may be made upon the ligatures, which all come away before the fourteenth day.

The patient should remain in bed a few days after the ligatures come away. The remaining wound gradually granulates, being eventually a sinus, which with proper stimulants (one of the best being nitric acid ten to fifteen drops to the ounce, or a probe coated with the nitrate of silver and passed into the wound daily, every other day, or as circumstances require) heals in a short time. The

quantity of fibrin, etc., effused will leave a "lump" in the scrotum, which, however, finally disappears.

The cases I operated upon by this method, as stated before, have made excellent recoveries. In the first case the scrotum was long, pendulous, and, instead of making an incision parallel with the raphe, I cut at right angles to it, making two curved incisions, thus removing about two inches of tissue from the front of the scrotum and materially shortening the sac when the sutures were applied. In this case, after the third day all fever subsided, and the ligatures came away, one on the seventh, the other on the thirteenth day. The second case was also successful, but devoid of any especial points of interest.

The third case did not do so well at first. The scrotum was very short, the varicocele slight, but sufficient to keep the patient out of the United States army. At his request I operated. High fever for a week and a slight slough of the tunica vaginalis occurred; then the case assumed a better character, and is now nearly well, nothing but a small opening still remaining.

After the patients leave their bed, I urge them to wear a good suspensory for a few months, after which they cast it aside. All of my cases have been up, attending to their various pursuits, by the sixteenth day; in fact, the last two were enabled to resume their work before the fourteenth day.

The advantages of the operation, briefly, are these: simplicity, certainty of success, and rapidity of cure,—to say nothing of the free drainage and the free exposure of the parts involved: hence the impossibility for any surgeon who knows anatomy to do other than what the case demands.

528 FRANKLIN ST., PHILADELPHIA.

## REDUCTION OF BACKWARD LUXATION OF THE THUMB.

BY J. F. HEEBNER, M.D.

I HAVE a minor operation, which I have utilized for the reduction of "backward luxation of the proximal phalanx of the thumb," and I would invite the profession to try it when opportunity affords. In many cases the ordinary method of extension, and the manipulation of Prof. Crosby, of New Haven, fail to correct the deformity, and usually tenotomy is resorted to for the purpose of dividing the two

heads of the flexor brevis muscle which clasp the head of the metacarpal bone. The idea occurred to me that these heads of the muscle could be separated, and the head of the bone liberated, without the operation of subcutaneous division, and by a means which would be less apt to be followed by subsequent impaired motion, and shorten the time of convalescence.

I use two ordinary uterine tenaculi, bending their ends to a very acute angle: one is intended for the inner head and the other for the outer head of the muscle. Begin to insert them by holding them as nearly parallel as possible to the metacarpal bone of the thumb, and, by a circular motion, insert the curved end of the tenaculum, keeping the point subcutaneous. Next introduce the tenaculum under the head of the muscle, in the same manner as you would a tenotome; then, turning the point upward, you have the head of the muscle in the elbow of the tenaculum. Insert the second one in the same manner. Now pull the heads of the muscle asunder, and allow an assistant to push the phalanx in place. In order that the tenaculi may be withdrawn easily, care must be taken not to insert it too far from the normal position of each head of the muscle; and in withdrawing it to make a circular sweep of the handle.

SCRANTON, May 16, 1883.

## NOTES OF HOSPITAL PRACTICE.

### HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

CLINICAL SERVICE OF PROFESSOR D. HAYES AGNEW, M.D.

Reported by GUY HINSDALE, M.D.

TRAUMATIC URINARY FISTULE—EXTERNAL PERINEAL URETHROTOMY.

GENTLEMEN,—This boy, 16 years of age, while in a freight-car was in some way caught between timbers and sustained a severe injury. Since this accident he has been unable to urinate. There are several reasons that may account for his inability to make water. The pelvis may have been seriously injured, or there may have been a severe shock or injury to the lumbar nerves or to the spinal cord, occasioning a loss of power. There may also have been a direct injury to the perineum.

Not long after the accident a hard lump of small size appeared in the perineal

region. In a few days this lump softened and discharged, urine then appeared at the opening, and there has been ever since a perineal urinary fistula. There may have been a fracture of the pelvis, and the urethra may have been damaged by a spicule of bone. You will also note that on the left side of the perineum there is induration for two inches around the opening of the fistula; it is an inflammatory swelling excited by the presence of the urine. Any severe contusion of the perineum may thus excite a stricture. The pressure upon the urethral channel may occlude it, producing distention of the tube immediately behind the stricture, the wall subsequently becoming more or less attenuated, and a fistula results.

But what is the treatment? Suppose the boy had come to us at once, and before urinary infiltration had taken place. The proper course would have been to pass, if possible, an instrument into the bladder. A good-sized soft catheter would probably answer this purpose best; it would not only unfold the plications of the urethra, but also tend to prevent the urine from escaping between the instrument and the walls of the canal. It is not always an easy matter after an injury of this kind to reach the bladder safely and quickly. The inflammatory swelling which rapidly ensues, or the particular direction in which the laceration runs, may present great obstacles to the introduction of the instrument; but every possible resource should be employed before abandoning the attempt, and of course the sooner the attempt is made the less difficulty will be encountered.

Suppose you are successful: you may nevertheless find that the water escapes between the sides of the instrument and the wall of the urethra. Under such circumstances the catheter not only fails to protect the tissues from urinary infiltration, but adds to the irritation of the surrounding parts. If, however, the urine flow wholly through the instrument, and no uneasiness be experienced by the patient when it is allowed to accumulate for a little while, its escape may be regulated and the bladder emptied at convenient intervals. But how long may the instrument be retained? This you will have to determine by the tolerance of the parts and the position of the rupture. When the latter is situated in that portion of the urethra in

front of the scrotum, and when the risk of involuntary or spasmodic expulsion of the urine is over, the vesical irritation attending the injury having subsided, I believe that it is better not to wear a permanent catheter at all. Nevertheless, it should be used to empty the bladder at such regular intervals as you will have found the urine to be comfortably retained. When the deeper portion of the urethra has been torn and the instrument has entered with difficulty, it is better to allow it to remain five or six days without being withdrawn, unless it give rise to irritation, indicating that its presence is harmful. I believe that its retention for a longer time than this not only retards the healing process, but is likely to beget an irritable and consequently a non-retentive bladder.

While you are treating your patient in this way, you should also cover the parts with either cold or hot fomentations, which ever may afford the more relief. The vesical irritation may be palliated by rectal injections of laudanum and starch-water, or by opium suppositories.

But if from the extent of the injury the instrument cannot be inserted, or it should fail to carry away all the urine, you will have to carry an incision directly down through the perineum until the damaged part of the canal is reached, affording a new channel through which the urine may readily escape. Attention may then be directed to the restoration of the urethra, and as the wound granulates and eventually heals the water takes its natural course.

I shall now pass an instrument into this urethra and ascertain its condition. This sound has been warmed to the temperature of the body, and is well oiled. You observe that the urethra is very sensitive. It is so because it has been out of use for a time. The sound passes in a certain distance, then stops. The obstruction is due to the deposit of inflammatory lymph. I try an instrument the next in size smaller. These are troublesome cases. When you can succeed in curing them it is a great surgical triumph. A cure transfers the patient from a very miserable condition to one of great comfort.

Having passed this instrument (a sound, No. 13, French) through, I will follow it up immediately with a larger one. Notice that I introduce my finger into the rectum. It serves as a guide in passing the instrument into the bladder. Whenever any

difficulty is encountered in the introduction of a catheter, never omit this important point. If you neglect it you may do irreparable damage. The instrument may slip in between the bladder and the rectum if there is want of precaution in this matter.

[NOTE.—Instruments up to the size No. 22, French scale, were then passed. On the 23d of November, 1881, Prof. Agnew being out of town, the operation of external perineal urethrotomy with a staff was performed by Prof. Ashhurst.

The staff was first introduced into the bladder; then a director was passed through the fistula until it touched the staff. The director being left in this position, an incision was made in the median line, and, the back of the knife being turned towards the rectum, the urethra was exposed where those instruments came together. The tissues between the wound in the median line and the fistula, which was a little to the left, were then divided. The cicatricial tissue about the stricture was quite dense.

A catheter was then introduced, its extremity projecting but slightly beyond the neck of the bladder; it was secured and allowed to remain for six days. About five weeks after the operation the patient was discharged cured.—REP.]

#### HYDROCELE.

This man comes here with a swollen or enlarged scrotum. On the right side you will notice, and in fact on both sides, but more particularly on the right, a swelling of peculiar shape; it resembles an hour-glass that is contracted in the middle, but with a swelling above and below the seat of constriction. The man says that the swelling has existed for fourteen years. He thinks that it commenced at the bottom and increased upwards. You will notice that the swelling remains of the same size whether the patient is standing or lying. These facts enable us to say approximately that it is not a hernia. When we grasp the tumor and make it tense, fluctuation can be easily recognized; furthermore, when we subject the tumor to a strong light, shutting out the rays that are diffused above and below, we find that the swelling is translucent. Putting together all these facts,—its shape, its manner of growth, the impossibility of its reduction, its fluctuation, and its translu-

cency,—there can be no hesitation in saying that it is a hydrocele. Hydrocele is a collection of serum in the tunica vaginalis testis. The presence of this serum is a proof of the existence of an inflammatory process, though of a very subacute kind. The disease is not, as a rule, traumatic in its origin. The peculiar constriction present in this case may have been produced by an inflammatory process after the introduction of a trocar at some previous tapping. I have seen cases where a complete septum has been formed in this way, resulting in a double hydrocele.

The treatment may be either palliative or radical. The former merely consists in making a puncture with the trocar and canula, and drawing off the accumulated fluid; but if you propose to cure your patient, after allowing the fluid to drain out you may then introduce into the sac the pure tincture of iodine. Two drachms are usually sufficient, and the iodine is allowed to remain. At first there is a feeling of pain or of numbness. The inflammation that results is quite acute, but on the fourth or fifth day begins to subside. The serum which follows the introduction of iodine is gradually absorbed; it is of a higher grade than the original contents of the sac. After the inflammatory process is over, the hydrocele is cured and the sac is changed. But how is it changed? It is a mistake to suppose that consolidation of the two layers of the tunica vaginalis occurs throughout its entire extent; the cavity is never obliterated. The action of the iodine is to modify the secreting surface, and, if you should open the sac and examine its walls, you would find that they would present an irregular, dull, dry, fibrous appearance, with delicate threads of organized lymph intersecting the cavity of the tunica vaginalis.

Tincture of iodine is almost an infallible remedy, being without tendency to produce suppuration, but giving rise to just enough inflammation to yield adhesive lymph.

In making the puncture we must avoid the testicle, which lies behind the serous accumulation. Taking the trocar, I introduce it nearly perpendicularly at first, and then I depress the handle. The absence of resistance indicates when the cavity of the tunica vaginalis is reached. The fluid that escapes is straw-colored, and will co-

agulate upon boiling or after adding to it the proper reagent. It is highly albuminous.

There are several conditions which, if present, forbid the attempt to make a radical cure. If you find an enlarged testicle, never inject anything into the sac; or, if you obtain a coffee-ground fluid upon tapping, it shows a diseased condition of the sac itself, and an injection would be improper. In this case we find the testicle enlarged, and it would be improper to inject the iodine. We shall therefore have to be content with the palliative operation.

#### VARICOCELE.

This patient has received a severe injury from the horns of an enraged bull. He says, however, that before the occurrence of this accident he had a swelling of the veins of the scrotum. The injury is therefore complicated with varicocele. This plexus of veins empties into the spermatic vein, which on the left side is destitute of valves. The blood-vessels therefore yield to the force of gravity, and become enlarged and convoluted. Upon the other side we find there is also a swelling extending half-way down the scrotum. It is soft and compressible, and when the proper pressure is made can be reduced. The patient has therefore a hernia on the right side and a varicocele upon the left.

Both these affections behave alike in the recumbent posture: the veins of the varicocele become emptied, and the swelling disappears; the hernia also returns within the abdomen. But as the patient rises and stands upon his feet the conditions vary very much; on the right side, as long as I guard the external abdominal ring, there will be no enlargement, but exerting the same pressure on the left side the tumor enlarges, and the difference is quite marked. This is an easy method of diagnosis. The varicocele is not of enough importance to require immediate operation. Should he complain of pain in the back and a dragging sensation in the loins, and should there be a change in the testicle itself, with a liability to softening, then operative interference would be proper; but here I shall advise simply the use of a suspensory bandage and local tonic applications of cold water, our object being to give tone to the whole dartos structure. He must wear an accurately-fitting suspen-

sory bandage, his bowels must be kept regular, and he must abstain from excessive exercise and heavy lifting.

In some instances the mental symptoms may be prominent; patients may fear that impotency is threatened; but even if on one side the testicle should be utterly destroyed, emasculation will not follow, for the remaining testicle is fully competent to insure virility. Endeavor to restore mental quietude; induce him to tolerate the inconvenience, and to dismiss from his mind any such forebodings.

When an operation is required we should attempt the obliteration of the veins by including them carefully in a subcutaneous ligature. It is not always possible or necessary to get them all, but only the chief ones. Sometimes this operation fails.

Since this man has a hernia, he should wear a truss. An examination shows that behind the protrusion there is a large mass of lymph or plastic matter, due to the injury that he has sustained. It will in time disappear, and we shall hasten this process by painting it from day to day with iodine. We shall also use adhesive straps and a compress. On the right side he should wear a truss. As I introduce an exploring needle into this swelling, a dark-colored fluid exudes. It is not necessary to open it, but, like blood-tumors elsewhere, the disorganized coagula will be absorbed.

#### TRANSLATIONS.

##### CONGENITAL ABSENCE OF ONE KIDNEY.

—Dr. Paul Guttman reports two cases of congenital absence of the right kidney complicated with anomalies of the genital organs, in *Virchow's Archiv* (for April 6). A review of the literature of the subject for twenty-five years was made by Beumer, who found forty-eight cases of total absence of one kidney recorded in this period. Thoma, in his great work upon the size and weight of the different organs in the human body in health and disease, adds a few cases to this list, which has been still further extended recently by Falk, Schwengers, and Thiebierge, until medical literature at present contains records of about seventy cases. To this number Guttman adds the following: B. K., a boy 15 years of age, had suffered with kyphosis, the result of a fall when he was three

years old; this was followed by a chronic abscess, which spontaneously opened three years before admission. When he came in, he had marked dyspnoea, cyanosis, oedema, catarrh of the lungs, hypertrophy of the heart, enlarged liver, albuminuria, with a daily discharge of only five hundred to seven hundred cubic centimetres of urine of specific gravity 1012-15. After his death the left kidney was very greatly enlarged, about twice the normal size for a boy of this age. The ureter was hypertrophied and also dilated. The right kidney and ureter were completely absent. The right seminal vesicle and vas deferens were also missing; the left about normal. Both testicles were normally developed, and apparently were alike. Unfortunately, they were thrown away before further examination could be made upon this point. Both suprarenal bodies were present.

P. A., a girl 20 years of age, died of consumption in the hospital. Physically she was poorly developed; the genitalia appeared like those of a girl of thirteen years; there was also extensive emaciation.

At the post-mortem examination the left kidney was found to be enlarged about one-third in size over the norm; the uterus was markedly dilated, and contained a small uric acid calculus. The right kidney was completely wanting, as well as the right ureter. The aorta was small, and there was no right arteria renalis. The genitalia were poorly developed, but apparently nothing abnormal existed up to the point of junction of the cervix and body of the uterus, when a difference in development was noticed. On the right side the broad ligament did not extend to the level of the cornu, but was defective. Apparently there had been originally a uterus bicornis, in which the left horn had developed, but the right had completely failed to do so. The right ovary and Fallopian tube were only rudimentary, and were recognized under the peritoneum at the side of the pelvis; the left ovary was also small; the left Fallopian tube was present and had its normal relations; the right, on the contrary, was only half the proper length, the peripheral extremity being apparently normal, but the uterine end terminated in a blind extremity.

As a rule, in these cases there is hypertrophy of the remaining kidney. It is heavier and larger than normal, which Beumer, after microscopic examination,

declared was not due to increase of the glomeruli and tubules, and therefore is to be attributed to hyperplasia of the connective tissue. Leichtenstern, on the contrary, has found the glomeruli enlarged, and also the diameters of the tubules, so that the increase in size is both hypertrophic and hyperplastic. As regards the two cases under consideration, Guttman found amyloid degeneration in the boy, and detected both hyperplasia and hypertrophy; in the girl there was no real hypertrophy of the anatomical elements, but simply hyperplasia.

#### ANTIPYRETIC ACTION OF AIR-BATHS.—

In a communication to *Wratsch* (1883, Nos. 3 and 4), Dr. Traubenbergs discusses the influence of air-baths upon the temperature, pulse, respiration, and muscular energy in the febrile state. Having a room so arranged that its temperature could be controlled, patients were brought in upon their beds without any covering; but at the same time the skin was diligently rubbed over the entire body either with the bare hand or with a woollen glove, so that the skin was made red; then the patient was allowed to rest until the hyperæmia had faded, or until he felt cool, when the rubbing was resumed, and this was continued during the entire air-bath. The bath continued from twenty to sixty minutes, or, as the rule, half an hour in most of the cases. Without quoting the phenomena in detail, the general result may be given as follows: there was decided though not great reduction of temperature both in the axilla and rectum, respiration became fuller and fell off about six to the minute on the average, the pulse likewise became fuller and decreased about thirteen beats in the minute. There were within certain limits considerable variation in the results, the effects being modified by the time of day, the greatest reduction corresponding with the time of the physiological ebb, which occurs between three and nine o'clock in the morning. The effects also varied considerably with reference to the temperature of the chamber itself. The least effect was obtained from the lowest temperature on account of the rapid contraction of the vessels, and in high temperatures there was not sufficient radiation from the body. In this respect a medium range of temperature must be selected. The most appro-

appropriate temperature to use must be a matter of experiment with each case. The period of the fever also has an influence: the later in the disease, the more effect is noticed from the air-baths. With regard to the duration of the bath, which also must be considered as affecting the results, the author considers that Liebermeister's aphorism applies,—“the effect is not proportional to the length of the bath.” In other words, it is more advantageous to give more frequent and less prolonged baths than the contrary. Individual peculiarities also are important: the younger the patient, the more extensive the bodily surface, the less muscle and fatty tissues are developed, the greater is the radiation. There is less likely to be depression of the patient after air-baths than after the cold-water applications. They are also more convenient and easier of application.—*Centralblatt für Chirurgie*, No. 21.

**ATROPHY OF THE BRAIN AFTER AMPUTATION OF AN EXTREMITY.**—The Academy of Medicine, at its last meeting, listened to a very interesting paper and report of a case by M. Bourdon, in which there was a local atrophy of the cerebral structures after amputation, this being the seventh example which this observer had collected. In a previous memoir on the subject M. Bourdon had demonstrated that the amputation of a member causes atrophy of the upper portion of the cortical layer of the convolutions in the motor region, as a result of the loss of functional activity. This is an important fact from a physiological stand-point. The present illustration also shows that this degeneration may extend also to the central portions of the cerebrum, and secondarily as far as the medulla oblongata. In this case an amputation performed forty years before, in which the arm was removed, had caused a paralysis of the leg on the same side. This remarkable result, it is seen, was a remote one, and only appeared towards the end of the patient's life. The autopsy showed an atrophy of the cells, and some of the nervous fibres which preside over movements of the leg, an atrophy which apparently had been very slowly and gradually established.

The case, in brief, was that of an old soldier, who had submitted forty years before to a disarticulation of the left arm, and

who died suddenly with cerebral congestion. Up to this time he had never experienced any cerebral disorder; but during the last years of his life the lower extremity on the same side as the amputated arm was gradually becoming paralyzed. At the examination of the brain, on the right side there was noticed a decided depression of the ascending frontal convolution. This was also observed in the paracentral lobule and the convexity of the right hemisphere. The lateral ventricle of the same side was considerably enlarged, especially at the level of the affected convolution, denoting a very extensive atrophy of the subjacent white substance. The corpus striatum also presented a depression near its centre, and the optic thalamus was flattened. Sections of the medulla oblongata showed that the median raphe was deviated to the right, and very markedly atrophied. Upon carefully weighing the hemispheres, the right was found to be thirty-one grammes less than the left.—*Revue de Thérapeutique Méd.-Chir.*, No. 11.

**RESORCINE IN THE TREATMENT OF PURULENT VAGINITIS.**—The recent introduction of resorcine into therapeutics has developed some properties which render it especially applicable for external use. Chéron has employed it with success in the treatment of vaginitis purulenta, in both the acute and chronic stage. When there is much tenderness, so that a speculum cannot be introduced, a soft catheter or tube is pushed in, and irrigations of from six to ten minutes' duration are practised three times a day of the following:

R Resorcine, 10;

Aquæ fortis, 1000.—M.

As a result, the purulent discharge is rapidly reduced, and the soreness subsides, so that a modification of the treatment may be made. He then applies

R Resorcine, 6;

Amyli glycerit., 60.—M.

This is to be carried to the bottom of the vagina, with the aid of the speculum, upon a tampon of cotton-wool, which is allowed to remain in place for from twelve hours to fifteen hours. The dressing is repeated every second day. Cure is thus obtained more rapidly than with the ordinary emollients and astringents.—*Le Progrès Médical; Revue Méd.-Chir. des Maladies des Femmes*.

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PHILADELPHIA  
MEDICAL TIMES.

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PHILADELPHIA, JULY 14, 1883.

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EDITORIAL.

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REGISTRATION LAWS AND THEIR  
OPERATION.

THE practical benefits derived from an enactment will depend quite as much upon the spirit with which it is enforced, as upon the letter of the law itself. Registration laws primarily intended for the protection of the profession seem particularly liable to fall short of their intended objects, not so much because of defective construction as of unfaithful interpretation; indeed, unless definite and comprehensive in expression, and fully sustained by public opinion, they may be made in practice to sanction and perpetuate the very evils they were intended to correct. It has been more than once asserted, by those fully qualified to judge, that in the neighboring State of New York the medical profession has really lost by the Registration Act more than it has gained. At the last meeting of the State Society of New York, it was mentioned as a fact, by one of the members, that an Indian medicine-man had driven into Rochester in war-paint and feathers, though engaged in the peaceful arts of selling patent medicine, and, having gone to the Prothonotary's office and paid the registration-fee, he had obtained a certificate as a physician, with full authority to practise under the law.

That this is not an isolated instance has been shown by the recent arrest of a Dr. Hale, a travelling lecturer in Cleveland, on the charge of circulating obscene literature. In the progress of the examination of this case, as we learn from the public press,\* he presented, as his authority to practise

medicine, a certificate from a certain county in the State of New York, allowing him to practise medicine in that State.

He had no diploma, and apparently no other credentials or qualifications for the practice of medicine. This man, who is a peripatetic popular lecturer upon sexual topics, had been arrested in Wheeling, West Virginia, by the prompt action of the efficient and active Secretary of the State Board of Health, Dr. Reeves; being driven from there, he next went to Toledo, whence he fled, followed by a warrant for publishing obscene literature, for which he was finally arrested in Cleveland, Ohio, where he was about to give a public lecture.

Much disappointment has been expressed by physicians in Pennsylvania, as well as in New York, at the operation of the Registration Act, it being claimed that the practical result is that, instead of elevating the profession above irregulars and charlatans, it has degraded the regular practitioner to the level of any one who can register under the Act, however unworthy he may be to be in the ranks of the medical profession. It seems more than absurd that a physician may commit a crime that will render him in the eyes of the law unworthy to exercise the franchise of a free-man at the polls, and yet no bar exist to his continuing in practice, and no means provided to annul or deprive him of the diploma he has dishonored.

That benefit may accrue from the Registration Act is evident from the following instance in which justice did not miscarry. A trial has just been concluded at Wilkes-barre, in this State, in which a "Dr." Taylor was duly convicted of practising without being a graduate in medicine of a chartered institution authorized to grant diplomas, and also of perjury, in swearing that he had been in the continuous practice of medicine since the year 1881. A motion for arrest of judgment having been entered, Judge Woodward refused a new trial, and

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\* Wheeling Register, June 28, 1883.

decided that the Registration Act, the constitutionality of which had been called in question, is not an *ex post facto* law, but in all respects a valid and constitutional statute. The motions in arrest of judgment and for a new trial were denied, and the prisoner was remanded for sentence.

The physicians of Luzerne County are to be congratulated upon their success in this test case, and it is to be hoped that it may be the precursor of many similar prosecutions to be instituted against transgressors of the law, less distant from this city.

#### EDUCATION OF CHILDREN.

WE have been perusing with much pleasure the small book recently published by Dr. Henry Putnam Stearns upon *Insanity, its Causes and Prevention*,\* and we can heartily recommend it to our readers, and especially to all persons who have care of children with sensitive and feeble nervous organizations. It seems to us very clear that in the modern system of perpetual examinations, and especially of competitive examinations, there lurks a very serious danger. All education should have for its object the training and development of the mind, rather than the acquisition of facts; whereas very often, if not usually, in competitive examinations it is the amount of facts crowded into the mind at the time of examination which is the basis of judgment. Over-ambition finds its victims especially in those children with sensitive, feeble, nervous systems, not only because such children cannot resist strain, but largely because such children morbidly desire to excel in their classes; to the powerful, vigorous boy the play-field is vastly more attractive than is the school-room, and his desire to overleap others finds its natural vent in athletics rather than in mnemonics.

The tendency to teach children many

things imperfectly rather than a few things perfectly is often but too apparent in our schools. Another more serious error, which is closely connected with many studies and long hours, is the teaching children to dawdle over the books. It is the exceptional man who will stand more than four or five hours a day of intense mental application; and yet the pulpy brain of the child is kept fuming over the books this length of time in school and two or three hours more out of school. Of course the attention does not remain fixed: the dawdling which results is nature's safeguard against ruin. Four hours a day for a child of fourteen years is sufficient; but the attention should during this time be kept fixed upon the subject, and the habit of close study thus acquired will be far more valuable than the primary knowledge taken into the brain. Short hours and intense application to a few studies are the foundation of an ideal school. To carry it out it is necessary that the classes be small enough for personal instruction.

In large classes mental habits are formed outside of the control of the teacher; the mind grows rather than is trained. If it be naturally strong and vigorous, it may grow nobly; if it be naturally crooked and distorted, or feeble and stunted, it grows into a more and more fixed crookedness, or sickens into perpetual dwarfhood, or perhaps dies out altogether.

#### AMBULANCE-SERVICE IN PHILADELPHIA.

THE Committee on Medical Charities of the Philadelphia Society for Organizing Charity announced at a recent meeting that steps had been taken to supply all the police-stations with hand-ambulance wagons, and before very long every station-house will be supplied; in some of the stations they have been already in active use for nearly two years. They recommend that four should be placed in the Park,

\* New York, G. P. Putnam's Sons, 1883.

where they will be accessible in case of accident, in addition to the horse-ambulance already stationed at Belmont. From the report of the committee we quote the following, with full approval:

"Although at the inception of this movement there were but two horse-ambulances in existence in this city, several of the hospitals have since provided them, or are taking measures to do so, in order to place themselves in correspondence with the new system. The horse-ambulances available for general purposes are now eight in number, omitting the two ambulances employed by the Board of Health for the Municipal or Smallpox Hospital, and also the Park ambulance. These hospitals are so distributed throughout the city as to admit of a convenient division into districts. There are but four general hospitals remaining that are without horse-ambulances. The additional expense which such an establishment entails is a serious embarrassment to the management of those hospitals which already have them, and prevents the others from making a similar provision. The committee therefore recommend that the city should annually make appropriations for the maintenance of the ambulance-establishment in the several hospitals. It is estimated that this would call for the expenditure on the present basis of between five and six thousand dollars, and, if made, would secure an equal administration of the service throughout the city. Brooklyn and other cities assume the entire support of the ambulance-service, and it would seem a most reasonable claim upon the city that it should incur the expense involved in the conveyance of persons at the instance of the police or other public officials to hospitals which thereby have thrown upon them the subsequent support and care of the individual. Where the conditions of suffering are so peculiarly urgent, humanitarian considerations strongly point to the importance of this measure, and demand that the administration of the ambulance-service should not depend upon an uncertain or precarious support."

## CORRESPONDENCE.

### LETTER FROM THE ORIENT.

TOKIO, JAPAN, May 28, 1883.

THE new press regulations, which require the deposit of one thousand yen (about \$750) to be made by each periodical, besides imposing some severe restrictions upon all publications, have, I understand, from statements in the *Japan Mail* and other papers, led to the discontinuance of a number of scientific sheets, as well as many of a political nature, at whose existence these rules have been aimed. Among those it is proposed to discontinue, I notice two medical journals,—one devoted to Chinese and Japanese medical practice, and one to Western medical science. It is to be regretted that these regulations should have been made to apply to journals of so purely a scientific character, and it is sincerely to be hoped that our contemporaries may be enabled to extricate themselves from the unpleasant position. One of these journals has quite a large circulation, has reached its

two hundred and sixty-eighth weekly issue, and consists of some thirty-six pages of very readable matter. The following is the table of contents of Number 268: Official Report of the Home Department, No. 8; Sea-Bathing in Japanese Waters; Bacteria; A Chronic Case of Skin Burning; Relation between the Doses of Medicines and Results of Treatment; Why there are so Many Cases of Stricture of the Esophagus in the Province of Yamato; Miscellany; Reports of the National Sanitary Board.

Western medical science seems to be gaining ground here, if we may judge from a late statistical medical report, which gives the number of physicians who have passed satisfactory examinations in medicine and surgery at 1625; those who have not undergone such examinations, 769; those who have pursued their profession from the time when there was no system of examination, 30,700; oculists, 502; surgeon-dentists, 124; accoucheurs, 417; bone-setters, 86; licensed apothecaries, 415; those who have been in practice from the time when there were no license regulations, 6426; government principal hospitals, 3,—branches, 19; public principal hospitals, 192,—branches, 40; private principal hospitals, 202,—branches, 11. It will be seen from the above that by far the larger number of practising physicians are still unlicensed, and probably practise according to the old Chinese system. It must be borne in mind, however, that the regulations requiring physicians to pass an examination in anatomy, physiology, materia medica, pathology, practice of medicine and surgery, and obstetrics, and to take out licenses to practise, only came into vogue a few years since, and did not affect those already in practice for three or four years.

Medical schools are now increasing in number, and consequently the number of students educated in Western medical sciences. The last annual report of the Medical Department of the University of Tokio shows the actual number of students as follows: medical students, 169 (course conducted by German professors); those following the same course in the Japanese language, 760; pharmaceutical students, 71; making a total of 1000. The number of graduates was as follows: medicine, 31 (German course); course in the Japanese language, 171; pharmacy, 133. At the same time there were abroad in foreign countries 94 students of medicine and 32 of pharmacy, mostly in Germany.

Among the private schools of medicine, that of Dr. Hasekawa, at Fukagawa, established in 1876, seems to be most numerously attended. The number of students since its establishment has been 2378; the number in attendance at present is 526, about 70 of which number annually obtain permission from the home office to practise. In this

school a dissecting-room has been open since the beginning of the present year. There are several smaller schools in various parts of the empire, but their combined output is not sufficient—nor will it be for some years to come—to meet the demand for well-trained physicians, which will be seen from the proportion of licensed and unlicensed physicians to the population given below.

The total population, January 1, 1882, was 36,700,118, of which 18,598,998 were males, and 18,101,120 were females; which gives only one licensed physician to about every 22,000 of population, and one unlicensed to every 1200; or, one physician, licensed or unlicensed, to every 1109.

### DANGEROUS SODA-WATER.

{ ANALYTICAL LABORATORY, 198 PENN STREET,  
PITTSBURG, PENNSYLVANIA, JUNE 22, 1883.

EDITOR PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The other day I walked into a drug-store in Pittsburg, and was soon engaged in conversation with the druggist. "My soda-water has a strange taste," observed the pharmacopolist. He drew a little of the water, and I tasted it. I then requested him to put up half a pint of it in a clean bottle, and told him that I would take it to my laboratory and examine it. This I have done; and I find the water to be dangerously impregnated with copper,—in proof of which I enclose a small piece of iron heavily coated with *metallic copper*, which coating was derived from only *two fluidounces* of the soda-water. The copper no doubt existed in this water as carbonate of copper, held in solution by excess of carbonic acid, and was doubtless derived from the saturators, which are in all cases made of that metal, and, I believe, generally coated inside with tin. By and by, however, the *tin* gets dissolved (as carbonate held in solution in excess of carbonic acid, and *then* (if not before) the copper is exposed. I say nothing about tin here, as I have not examined for it. It has frequently occurred to me that in every large city there should be a public analyst, whose business it would be to examine solids and liquids used as foods, in the interests of public health. But why do I make such a suggestion? To judge from other appointments, the situation would be given to some political bummer, some cheap incompetent, some school-boy fresh from some miserable college, some pedagogue mouthing chemistry from a book, some donkey compared with which Balaam's was an ass of genius, some old soldier with a wooden arm or perhaps with even a wooden head, or something else equally ridiculous.

I am, sir, yours faithfully,

GEORGE HAY, M.D., etc.,  
Chemist.

### PROCEEDINGS OF SOCIETIES.

#### THE AMERICAN NEUROLOGICAL ASSOCIATION.

THE ninth annual meeting of the American Neurological Association was held in New York City June 20, 21, and 22, 1883, with two sessions each day, afternoon and evening. Dr. T. R. Edes, of Boston, President of the Society, occupied the chair.

#### THE PRESIDENT'S ADDRESS.

In his address at the opening of the session Dr. Edes discussed recent progress in neurophysiology, and more especially the advances in the theories of cerebral localization in their relation to clinical medicine and therapeutics. He declared that the clinician often does not sufficiently distinguish between the symptomatology of functional and organic disorder of the nerve-centres, and consequently cases are reported as instances of organic disease cured by treatment, although they may really have been instances simply of functional disorder. On the other hand, he claimed that pathologists are too apt to regard the changes discovered in post-mortem examination as existing throughout the course of the disease, whereas they are gradual and progressive, and are often preceded by a period of purely functional disorder.

The death of Dr. Beard was alluded to, and a letter was read from Dr. E. Seguin, now in Zurich, regretting his inability to perform his duties as Secretary, and asking to be relieved of them.

Dr. R. W. Amidon, of New York, was appointed Secretary *pro tem*.

The Council recommending the following candidates, Drs. Leonard Weber, of New York, G. L. Walton, of Boston, and J. T. Eskridge, of Philadelphia, they were unanimously elected to active membership in the Association.

A ballot for officers was held, with the following result:

#### OFFICERS FOR 1883-84.

*President*.—Dr. Isaac Ott, of Easton, Pa.

*Vice-President*.—Dr. W. R. Birdsall, of New York.

*Secretary and Treasurer*.—Dr. R. W. Amidon, of New York.

*Members of Council*.—Drs. V. P. Gibney and W. J. Morton, of New York.

#### OBITUARY NOTICE.

On motion, a minute was directed to be made of the death of Dr. George M. Beard, Drs. C. L. Dana and C. K. Mills being appointed by the chair to prepare it.

#### TRAUMATIC NEURITIS OF THE ARM.

Dr. W. J. Morton, of New York, reported a case of a man, 65 years of age, who, after a

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dislocation of his shoulder had been reduced, presented a peculiar condition of the hand. There was decided pain and swelling of the wrist and hand, with lowering of temperature; the skin was smooth, glazed, and mottled; there was more or less œdema; the nails were curved, the finger-ends clubbed; movement was painful and very much impaired; there was an exaggeration of tactile sense, and diminished temperature-sense; the electrical response was altered, and approached the reaction of degeneration in the right forearm. About ten months after the appearance of the symptoms a similar series of phenomena appeared on the left side, though to a much less degree. The case was regarded as one of injury to the right brachial plexus, caused by direct injury to the shoulder, followed by motor and sensory disturbance below, and also by an ascending neuritis, which subsequently led to the changes upon the opposite side. The symptoms that were peculiar in this case were the fibrous hyperplasia, and, secondly, the increased reflex excitability. Dr. Morton concluded, therefore, that neuromuscular hyper-excitability may exist as a symptom of ascending neuritis when this has extended to the spinal centres.

This peculiar condition had been discovered by Charcot in cases of hypnotism, but had never before been reported as a phenomenon of traumatism of peripheral nerves. Dr. Morton then presented the patient, who was examined with general interest. The treatment had been by blistering along the course of the nerves, and the hot and cold douche, with the internal administration of cod-liver oil, with marked benefit.

In the discussion upon the case the explanation of Dr. Morton was accepted, and other cases of traumatic neuritis referred to. In the treatment Dr. Hammond insisted upon physiological rest for the inflamed nerve, and to obtain this he had practised nerve-stretching. Dr. Putnam, of Boston, recommended the ice-poultice, kept on continuously for many hours in succession, the precaution being taken not to freeze the skin, by placing a piece of flannel on its surface.

#### HYDROBROMIC ACID AND THE BROMIDES.

Dr. C. L. Dana read a communication entitled a "Note on Hydrobromic Acid as a Substitute for the Bromides." Dr. Dana claimed that the official ten-per-cent. solution of hydrobromic acid is an efficient substitute for the alkaline bromides in *insomnia*, but it should be given in doses much larger than those usually employed. He had found that very satisfactory results could be obtained from drachm doses of the official dilute solution. The bromides may be substituted by the acid in all the milder disorders for which they have been used. Especially in cases requiring vascular and nervous sedation is the acid serviceable, and he had used it in a

number of cases with benefit. In *epilepsy* some patients had been markedly improved by drachm doses four or five times a day; others had not received any good from its use. In *chorea* and *alcoholism* it had proved an adjunct to other treatment. It is a good solvent of quinine, but Dr. Dana stated that, contrary to the usual belief, it does not prevent cinchonism.

Dr. Hammond, in discussing the paper, said that after several years' experience he had abandoned the use of this agent because of its inferiority to the bromides: he was satisfied, however, that it really does possess the power of preventing the unpleasant nervous effects of quinine.

Dr. Eskridge confirmed the statement that cinchonism is controlled by hydrobromic acid: he also recommended its use in typhoid conditions to relieve insomnia.

#### PECULIAR SYMPTOMS OF LEAD-POISONING.

Dr. J. J. Putnam, of Boston, read a paper entitled "Lead-Poisoning simulating other Forms of Disease," in which he also directed attention to a source of error in examining the urine for lead from the similar reaction produced by bismuth.

He insisted upon the importance of a routine examination of the urine in all cases of suspected lead-poisoning, even when the symptoms may appear to indicate other disease.

After referring to a case in which the nervous phenomena appeared to indicate the presence of *lateral sclerosis*, reported by Dr. Minot (in which lead was found in the urine, and the patient recovered after the administration of iodide of potassium), he gave the details of eight cases which had come under his notice, where the symptoms had not been characteristic of lead-poisoning, but lead had been detected in the urine, and upon the urinary analysis the diagnosis had been made. He referred particularly to cases of nervous disorders presenting symptoms of disease of the spinal cord, dyspepsia, lithæmia, and chronic nephritis, which were found to be due to lead-poisoning. Under the head of lead-encephalopathy, a number of nervous symptoms have been described, among which the most prominent are delirium, mania, dementia, epilepsy, and coma, but there are doubtless a large number of less clearly defined phenomena which are attributable to this cause.

He recommended the administration of potassium iodide for several days prior to the urinary examination, and directed that at least one quart of urine should be employed for the analysis. From personal experiment he had found that bismuth will respond equally well to the tests usually employed, and he declared that traces of bismuth may still be detected in the urine several weeks after its administration by the mouth.

## A URINAL FOR WOMEN.

Dr. Putnam also exhibited a copper cup of appropriate shape, having an inferior attachment to rubber tubing, so as to convey its contents to any desired receptacle. The apparatus was intended to be used as a urinal by female patients while sitting in a chair.

## A CASE OF GENERAL NEURALGIA.

Dr. J. T. Eskridge, of Philadelphia, reported the following interesting case of nerve-disorder. A German, 29 years of age, free from venereal or inherited taint (father died of acute spinal disorder), a laborer in a foundry, came to St. Mary's Hospital, January 15, 1883, with the following history. He had had three healthy children, and had been usually in good health until 1873, when he had an attack of pneumonia and was in bed four weeks. Subsequently he was well until two years ago, when he caught cold from sleeping in a damp bed. He then had a dull aching pain in the spine, with sciatica on the left side, but he managed to keep at his work in the foundry. In October, 1881, he accidentally burned his left foot superficially with hot iron, which confined him in bed in a hospital for ten weeks; after this rest he returned to his work, comparatively free from pain, but the pain returned shortly afterwards in the left leg and ankle, which progressively increased until it obliged him to return to the hospital, in October, 1882. He again improved for a time, but the symptoms returned after he resumed his work, so that in January, 1883, he was scarcely able to walk, and he came to the hospital, complaining of great pain in the leg and back. There was tenderness along the spine in the dorsal and lumbar regions, extending down the nerve-trunks in the left leg, which were also the site of intense neuralgic pain. The right leg remained normal, but double intercostal neuralgia soon appeared and became constant. Alternating hot and cold applications to the spine and along the left sciatic gave great relief. The patient slowly improved under general treatment. Most of the large superficial nerves, except the fifth nerve, were painful upon pressure. The case was pronounced one of general neuralgia, in preference to the view of its being a neuritis consequent upon spinal meningitis.

## LOCOMOTOR ATAXIA AND GENERAL PARALYSIS.

A case of locomotor ataxia, terminating in general paralysis, was reported by Dr. Charles K. Mills, of Philadelphia. The man was 47 years of age, of good constitution, and had been under treatment for three years for so-called rheumatic pains. There was a history of chancre without sequential phenomena, and also of venereal excess and intemperance. Ataxic symptoms were well marked. Two years later the *délires des grandeurs* gradually appeared, and he finally died in a hospital

for the insane. The autopsy revealed opacity of the pia mater, with congestion and adhesions; there was marked decortication and atrophy of the cerebral convolutions. The pia of the cerebellum was likewise deeply congested and adherent, especially over the superior vermiciform process; the pia of the cord was also thickened, and the cord itself shrunk and irregular on its surface. Sclerosis of the posterior columns was present throughout the extent of the spinal cord; it also extended to the pons, crura cerebelli, optic thalami, and in the cerebral convolutions, and into the cerebellum. There was also general meningitis of the pia mater.

Dr. Mills, in conclusion, referred to a number of other cases illustrating a relation between posterior sclerosis and general paralysis of the insane, reported by Obersteiner, Hamilton, Plaxson, Meckel, and others.

In the discussion similar cases were mentioned by Dr. Shaw and Dr. Webber.

## SYMPTOMS OF PARETIC DEMENTIA.

Dr. E. C. Spitzka, of New York, presented some remarks on the supposed relation of speech-disturbance and the patellar tendon reflex in paretic dementia. In a former paper Dr. Shaw had pointed out a possible connection between exaggerated reflex and speech-disorder in general paralysis. The lecturer detected a source of error in an associated pathological condition of the brain. In paretic dementia there is, as the rule, a diffuse disorder of the entire cerebro-spinal axis, the lesion being in different cases concentrated in the cord, in the cortex, and in the isthmus. A speech-disturbance may be due to a high cortical lesion, and be permanent, or it may be connected with vaso-motor disturbance and be evanescent, just as in cerebral or meningeal hemorrhages speech may be permanently or temporarily affected. Speech-disorder may also be connected with lesions of the medulla oblongata. The presumption is that the exaggerated tendon reflex may be due to associated changes, since in a large number of cases no direct connection could be shown to exist.

Dr. Shaw, in reply, disavowed any intention of attempting to connect the spinal cord with the speech-centre, as implied in the paper just read. His paper had considered the condition of the tendon reflex in paretic dementia, and of seventy cases twenty-two exhibited an exaggeration. He merely wished to put these results of clinical observation on record, without discussing the pathology.

*Second Day's Proceedings.*

## MENTAL LABOR AND THE EXCRETION OF PHOSPHORUS.

The President, Dr. Edes, read a paper on the "Excretion of the Phosphites and Phos-

phoric Acid as connected with Mental Labor." From a number of physiological experiments which he had made upon himself, he was unable to detect any increase of phosphorus-excretion after brain-work; indeed, if anything there was a decrease. He concluded that the value of phosphorus as a remedy for mental fatigue or overwork must rest upon a clinical rather than a chemical basis.

#### UNUSUAL SYMPTOMS OF LOCOMOTOR ATAXIA.

Some cases of locomotor ataxia were reported by Dr. S. G. Webber, of Boston, which were considered interesting on account of unusual symptoms and marked remissions. The first case had simply gastric crises, which were very severe, but they had none of the other ordinary characteristic features of ataxia. The second had only a peculiar dyspnoea, due to exaggeration of the girdle sensation. Diabetes, and deafness, sometimes unilateral, were present in other patients.

In another case there had been an entire remission of the symptoms for three years, and he regarded the case as virtually cured. He believed it reasonable to think that when the ataxic symptoms develop rapidly, the prognosis is more favorable than in the other class of cases.

Dr. Jewell, of Chicago, in discussing the paper, insisted upon the necessity of absolute rest in bed for months in locomotor ataxia, with massage and passive exercise to keep the muscles in good condition.

#### PRESENTATION OF INTERESTING CASES OF NERVOUS DISEASE.

Dr. R. W. Amidon presented a boy suffering with tetanoid paraplegia, the symptoms being preceded by indications of subacute hydrocephalus. He inquired if the tetanoid symptoms might not be due to secondary changes in the cord, due to extension of the cerebral disease downwards. The pathology of the case was quite obscure.

Dr. Amidon also presented two cases of paralysis agitans, in which tremor was entirely absent.

Dr. V. P. Gibney, of New York, showed two cases of progressive muscular atrophy, and one with atrophy and fibrillary twitchings following gunshot wound.

#### DEVICE FOR WRITER'S CRAMP.

After a brief reference to some of the forms of apparatus devised for writer's cramp, Dr. Morton, of New York, explained his modification of Nussbaum's method of treatment, and showed a thimble penholder, the thimble being sufficiently long to cover the entire index finger. By thus enforcing extension and preventing flexion, much amelioration had been derived in his experience.

#### Third Day's Proceedings.

##### CASE ILLUSTRATING RESTORATION IN LOCOMOTOR ATAXIA.

Dr. G. A. Hammond presented a patient, 47 years of age, in whom, after presenting ataxic symptoms, with characteristic pains and absent patellar tendon reflex, there had been a return of this phenomenon, and every other symptom of the disease had disappeared. There was a history of syphilitic infection without subsequent symptoms. The treatment had been by potassium iodide, electricity, and the usual measures.

Dr. William A. Hammond corroborated the diagnosis in this case.

##### NUTRITIVE CHANGES FROM NERVE-LESIONS.

Dr. Miles, of Baltimore, reported an interesting case of nutritive changes in the hand from pressure of a dislocated humerus upon the brachial plexus. There was great deformity, glossy skin, loss of power, insensibility, which had all developed gradually after dislocation of the head of the humerus into the axilla, indicating the presence of neuritis.

##### COMPARATIVE CEREBRAL ANATOMY.

Dr. B. G. Wilder, of Ithaca, New York, read a brief description of the brain of a cat, in which there was complete absence of the corpus callosum, and exhibited a number of photographs. He also read a paper "On the Alleged Homology of the Carnivora Fissura Cruciate with the Primata Fissura Centralis."

Referring to the assumption of T. Lauder Brunton (*Brain*, January, 1882) "that these fissures correspond," Prof. Wilder made the following suggestions:

*First.* Writers should specify whether by correspondence they mean *analogy* or *homology*, as a relation based upon the position of a fissure based its location among experimentally-determined "motor areas," or a relation implying identity as determined by embryology and comparative anatomy.

*Second.* The present disagreement of competent authorities respecting the homology of these two fissures should restrain both physiologists and zoologists from assuming the correctness of any particular view; for example, the human centralis has been homologized with not only the cruciate, but the superorbitalis, the coronalis, and the ansata, together with the coronalis (in connection with the last idea was shown a fetal human brain exhibiting the somewhat rare condition of an interruption of the centralis); the cruciate has been homologized with not only the centralis, but with the first frontal, the calloso-marginalis, and the occipito-parietal; *i.e.*, the surest method of determining the true homology seems to be the one which is outlined in Wilder and Gage's "Anatomical Technology," to make careful and extended com-

parison between the brains, especially fetal specimens, of man, monkeys, and the *lemurs* on the one hand, with those of cats, dogs, and seals on the other.

The *lemurs* are primates with some characters of the carnivora, while the seals, though carnivora, have the occipital lobe and the post cornu of the procellia (cornu posterius of the ventriculus lateralis).

#### THE TREATMENT OF MIGRAINE.

Dr. W. J. Morton read a paper upon the treatment of migraine. Adopting the hypothesis of Du-Bois Reymond that migraine is due to a contraction or tetanic state of the blood-vessels of the affected side, he claimed that this "vaso-motor theory" affords a definite working basis for the practical treatment of the disease in which clinical observation and physiological experiment are in complete accord. The best evidence seems to point to the cervical sympathetic or its corresponding spinal centre as the cause of the vaso-motor disturbance and the site of the disease. As one or the other is affected, cases will be of the *angeio-spastic* or *angeio-paralytic* type of the affection, the former being more common. The treatment is based upon the type of the disease. In the *spastic*, sodium bromide is very serviceable, continued, if need be, for months. Cod-liver oil and iron may also be given conjointly. Both *glonoin* and *nitrite of amyl* also are useful. In the *paralytic* type, on the other hand, *strychnia*, *ergot*, and *electricity* are most serviceable.

In the discussion, Dr. Hammond suggested the surface thermometer as a means of diagnosing the two types. Drs. Mills and Dana could not endorse the views so positively put forth.

#### SYPHILIS AND LOCOMOTOR ATAXIA.

Dr. W. R. Birdsall, of New York, read a paper in which he presented statistics with reference to the relation between syphilis and locomotor ataxia. He had collected five hundred and twenty-five cases of locomotor ataxia, of which two hundred and twenty-five had syphilis (forty-three per cent.). The cases were from Rosenthal, Bernhardt, Remak, Westphal, Pusinelli, Gowers, Fournier, Erb, together with forty-two which had come under his own observation. There was a marked difference in the percentage of syphilis in the cases reported by different observers. For instance, Erb, in one hundred cases, reports syphilis present in eighty-eight per cent., while in his own cases (forty-two) only four per cent. of the patients had syphilis. Probably the differences were due to accidental relations.

#### EXHIBITION OF APPARATUS.

An improved hand-electrode, for making careful tests of the electrical condition of tis-

ues, was exhibited by Dr. Birdsall. By an ingenious arrangement the current could be interrupted and reversed at the same time while the electrode was being employed in making the examination.

#### READ BY TITLE.

A paper sent by Dr. H. D. Schmidt, of New Orleans, on the "Pathological Anatomy of the Cerebro-Spinal Axis of a Case of Chronic Myelitis of Nineteen Years' Standing," was read by title, and referred.

#### GALVANIZATION OF THE BRAIN IN CHOREA.

Dr. C. L. Dana, of New York, read a "Note on the Treatment of Chorea by the Sedative Galvanization of the Brain." He reported eight cases of anodal cerebral galvanization; the patients all recovered. He claimed it as a valuable adjunct to the treatment of chorea, and said that it may be combined with advantage with the internal administration of arsenic. The method of application is as follows. A large sponge-electrode of flexible brass, four by two inches, is thoroughly moistened with salt water. The hair of the patient is also thoroughly wetted, and the electrode applied over the side of the head above the ear. In hemichorea it need only be applied over the side opposite to the one affected. The other electrode is placed in the hand of the affected side. The electrode upon the scalp is made positive, and a current, three to six Stohrer's, four to eight Daniell's cells, is passed for from three to five minutes. The electricity should be applied daily for at least ten days. If after that time there is no improvement, other treatment may be instituted.

#### THE REMOVAL AND PRESERVATION OF THE HUMAN BRAIN.

Dr. Burt G. Wilder read a paper insisting upon the importance of careful removal of the brain for histological research, and described the methods in use at Cornell University. He said that the calvaria should never be removed with a jerk, but by sawing through a little to one side of the great longitudinal sinus, and then removing the sides carefully after releasing the dura by means of a thin-bladed flexible knife with curved point. The brain should never be allowed to support its own weight, but should be suspended in strong brine. Several points concerning the handling of the brain were mentioned. The method of preservation which he preferred was by means of alcohol, beginning with fifty or sixty per cent. and gradually increasing the strength until the ordinary ninety-five per cent. is reached. He also passes alcohol through the vessels of the brain in a continuous stream for some time, and, besides, irrigates the central cavities of the brain. Whether brains hardened in this manner are well preserved for microscopical examination he was unable to say.

## PAPERS READ BY TITLE.

Dr. Wilder also presented a paper entitled "On Some Points in the Anatomy of the Human Brain," which was read in part, and referred.

A paper by Dr. E. C. Spitzka, on "Lesion of the Stratum Intermedium," with remarks and specimens illustrating the anatomy and physiology of this tract, was also read by title.

## CASES OF HYSTERIA.

Dr. G. L. Walton, of Boston, reported a case of hysterical hemianæsthesia in a man, following injury; and another one of hysterical anæsthesia of special senses (hearing, smell, and taste) accompanying cutaneous hyperæsthesia. Both cases were relieved by the use of the magnet.

The Association adjourned, to meet at the call of the Council.

## PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CLINICAL conversational meeting of the Society was held at the Hall of the Society on Wednesday, April 18. Dr. H. C. Wood presented the following notes of

## HYDROPHOBIA, WITH INCUBATION OF THREE AND A HALF YEARS.

L. C., aged 26 years, was bitten July, 1878, in the thumb, by a dog which ran into the bank where he was employed and immediately ran out again. He went at once to a druggist, who applied nitrate of silver. The wound healed readily, and the sufferer remained in his usual health until December 22, 1882, about three years and a half after the infliction of the wound. Upon this day he left the bank feeling very unwell, and after a sleepless night sent for Dr. Harrison Allen, who, recognizing the gravity of the case, called me at once in consultation. My first visit was about 12 noon, December 23. At this time the patient was in a state of great anxiety, very pale, with very wide open, almost staring eyes, and a large, full, but very compressible pulse of 72. The respirations were irregular, continually interrupted by a spasm of the larynx and throat, which at times involved also the respiratory muscles. He had no dread of water, but any attempt to swallow produced violent spasms of the throat and respiratory muscles. Similar but less violent attacks were also caused by talking, so that the patient was only able to say a few words at a time.

At 7.30 P.M. the condition of the patient was worse; with the utmost efforts he had only been able during the day to swallow a few teaspoonfuls of liquids, and there was as much difficulty in swallowing solids as liquids. The pulse was 84; the patient was exceedingly

alarmed and anxious, but perfectly rational; the axillary temperature 100.2° F.; the mouth dry. Respiratory spasms were very frequent.

At 12.10 midnight the mental condition had changed. All persons were still at once recognized by the patient, who was extremely excited, and delirious, not infrequently violently so. He had marked hallucinations, insisting that some one was under his bed. He raved continually, and at times force was necessary to keep him in bed. The pulse was 96; the temperature 101.5°; the respiratory spasms very bad and frequent. Enemata of all kinds were at once and violently rejected from the rectum. Swallowing was almost impossible.

December 24, 9 A.M.—The nurse reported that the patient had raved furiously all night. The symptoms were all worse; otherwise unchanged, except that he was continually spitting small quantities of a dry, thick, tenacious sputum. The staring expression of the eyes was remarkable. The raving delirium was marked by great anxiety and semi-unconsciousness, but when aroused the patient still recognized people.

At 6 P.M. the patient's strength was evidently failing; the mental condition unchanged. The expectoration had become much freer, but a good deal of it was still thick, almost grumous, discolored, even bloody. The under-lip was greatly swollen, from the continual biting of it during the spasms.

At 10 P.M., on attempting to swallow, the patient had the first general convulsion: when awake he was raving; much of the time he was in stupor. He died quietly the same night about 1 A.M.

*Autopsy.*—Brain much congested; the membranes over the pons and medulla very opaque. Sections of the medulla show in the neighborhood of the olivary bodies and in the floor of the fourth ventricle slight extravasations of blood; the cells of the nuclei slightly granular; no distinct lesion.

## CASE OF GLIOMATOUS TUMOR INVOLVING THE FIRST, SECOND, AND THIRD FRONTAL CONVOLUTIONS.

Dr. H. C. Wood showed a brain taken from the body of E. M. at the Philadelphia Hospital. The man, whose age was probably about 30 years, had entered Dr. Wood's wards about two months previously. It was found impossible to get any reliable history, except that the symptoms had gradually developed. Whilst under care the man was very stupid and heavy, and had very decided but not complete aphasia. He rarely made complaints, but appeared to suffer from occasional severe headaches. The only other symptom was epileptic fits. These were very severe, of varying frequency, and accompanied by complete insensibility. The attendants asserted that the whole body was convulsed; but he was never seen in a fit by Dr. Wood. The right arm and leg were decidedly feeble, especially the arm, but there

was no complete paralysis of motion or of special sense, so far as could be determined. The mental condition was such that both taste and smell might have been affected without such affection being manifest.

All the symptoms, in spite of treatment, gradually grew worse, and the epileptic attacks became very frequent and severe. The day before his death the man had twenty or thirty seizures, being most of the day in an epileptic status. He was stated by the nurses to have recovered consciousness in the evening, and the evidence was conclusive that after 6 P.M. the day before his death he had no more convulsions, and that early on the day of his death he was in his usual state. He was seen by Dr. Wood about 11 A.M. the day of his death. He was then completely unconscious and relaxed. The skin was extremely hot. Directions were given to take the bodily temperatures before and after death, with the following results:

First temperature, $\frac{1}{2}$ hour before death, three or four hours after unconsciousness came on . . . . .	107.4° (axilla)
Immediately after death . . . . .	108° (mouth)
$\frac{1}{2}$ hour after death . . . . .	109° (rectum)
1 " " " . . . . .	108.4° "
1 $\frac{1}{2}$ " " " . . . . .	108.2° "
2 " " " . . . . .	107° "
2 $\frac{1}{2}$ " " " . . . . .	106.9° "
3 " " " . . . . .	104.4° "
3 $\frac{1}{2}$ " " " . . . . .	101.8° "
4 " " " . . . . .	99° "
4 $\frac{1}{2}$ " " " . . . . .	98° "

At the autopsy, a large diffused gliomatous mass was found occupying most of the interior of the left frontal lobe, pressing below upon the island of Reil, reaching superiorly and interiorly almost to the ventricles; posteriorly and superficially it encroached upon the lower portions of the ascending frontal convolution; no clot existed anywhere in the brain, but there was a general congestion, which was especially marked in the parts about the growth.

Dr. Wood remarked that the case was especially interesting on account of the great and rapid rise of temperature which occurred during the last apoplectic seizure, although there was no convulsion at the time. The cortex in immediate contiguity with the tumor, and hence most likely to be chiefly affected by a congestion, corresponds anatomically with that portion of the cerebral cortex of the dog which he had found to have some close connection with thermogenesis. There seems to have been in the case a true post-mortem rise of temperature, because a degree is greater than the normal difference between the mouth and rectum.

Dr. Bartholow said that the tumor was interesting on account of its unusually large size. Tumors of the anterior lobes are generally accompanied by epileptiform seizures,

as Ladame has shown. Tumors of the cerebral cortex have, by their localizing symptoms, contributed to our knowledge of cerebral localization. In Cincinnati, some years ago, he had seen a woman who had died in a public square, and in whom the autopsy showed a tumor of the anterior convolutions, although no symptoms of it had existed during life. The late Dr. J. Hughes Bennett, a man of well-known and remarkable ability, had a tumor of the middle lobe without any symptomatic evidence of it during life. In regard to the question of temperature, Dr. Wood's position is in accordance with his theory, but it cannot be denied that tumors of this region may exist without producing any rise of temperature. Besides, this patient had numerous violent convulsions before death, and muscular action will induce changes which can account for the rise of temperature observed. Without positively denying the existence of a heat-centre, we can account for the temperature-record in this case by supposing it due to the convulsions. We know that muscular motion in animals will cause rise of temperature, and we know also that the chemical activity of the liver is sufficient to make it hotter than any other organ of the body.

Dr. Mills said that muscular motion cannot entirely explain the rise of temperature. He had seen a case of diffuse sclerosis in which the temperature continued to rise for six hours after death. Sometimes we have depressed temperature during life, at other times remarkable oscillations occur. He had reported a case in which such oscillation ranged from 93° to 100°. This was one of tumor,—in the optic chiasm.

Dr. Eskridge thought it very unfortunate that all the temperatures were not taken at the same point. He had found by trial that the temperature may be one-half or even one degree higher in the rectum than in the mouth at the same moment. In other cases, the temperature in the mouth was found to be two degrees higher than in the axilla: this is, however, rare, having been seen only in cases of extreme prostration. The only explanation of this difference is that the internal organ, being protected, suffers less from the radiation of heat. In the case under discussion we cannot safely draw a conclusion, as the temperatures were not taken at the same place.

Tumors of the anterior lobe may exist without any symptoms. About one year ago he reported to the College of Physicians several cases of abscess of the brain. In one of these the symptoms of serious brain-lesion immediately preceding death were not well pronounced. The patient, a man aged about 60, went about noon from the third to the first story of his residence, ate a large dinner, ascended the stairs unassisted to his room in the third story, lay down, and was seen sleeping at 4 P.M. At 6 P.M. he was dead. The autopsy

revealed a large abscess which had destroyed a large part of the front portion of the right anterior lobe.

Dr. L. Turnbull regarded the subject of temperature as involved in much uncertainty. Every one is a rule for himself. High temperature is regarded as a sign of phthisis, cancer, etc., but is not always a sign. Muscular motion, as remarked by other speakers, will certainly cause elevation of temperature. It would be interesting to know what was the condition of the hearing in Dr. Wood's case.

Dr. Bartholow said that although the convulsions did not occur on the day of death, they were very violent on the previous day. The rise of temperature can be referred to the chemical changes resulting from the violent muscular motion.

## REVIEWS AND BOOK NOTICES.

LECTURES ON CATARACT. By GEORGE COWELL, F.R.C.S. Macmillan & Co., London, 1883.

This little book of one hundred and twenty-six pages comes to us printed in fine, large type on heavy English paper, and well bound for the library. It contains six lectures delivered to the students of the Westminster Hospital, and, as the writer claims neither special merit nor originality, there is really nothing to say but that it is a handy little volume on the subject it treats, and that it is, as he says, not exhaustive, and therefore the student must seek further if he desires to be thoroughly booked up on the subject. It is well written, and a pleasant, readable book, but contains much less upon the subject it treats than is found in some of the more complete text-books, such as Stellwag, Soelberg Wells, De Wecker, etc. He gives, however, descriptions of some newer and later methods of some special surgeons. Very curiously, also, he applies the term secondary cataract instead of false cataract (*cataracta spuria*), and of anterior capsular cataract with posterior synechia, to cases where the pupil is closed from an infusion of lymph from iritis, and to the opacity of the lens produced by inflammatory changes from iritis, irido-choroiditis, etc., while nowhere is found a description of what is called, by all the well-known authors in ophthalmology, really secondary cataract,—i.e., a thickening with translucency of the posterior, sometimes anterior, and at others of both capsules, after the operation for the removal of the cataract, be it by solution or by extraction. Neither does he speak of the necessity of operative influence in such cases to give vision. From these lectures it would naturally be supposed that all operations for cataract were either at once successful or complete failures, for he mentions nothing of the dangers of inflammation which may occur after

the operation, with its oftentimes sequel of occlusion of the pupil from iritis or secondary cataract, from thickening of the capsule, with their remedies and treatment by operation, etc.

On page 60 he says, "It appears that David, in the year 1748, was the first to extract a cataractous lens;" whereas it was Daviel, and, as he wrote his article on "*Extractio Cataractæ*" in 1745, he must necessarily have made the operation before that time. P. D. K.

THE INTERNATIONAL ENCYCLOPÆDIA OF SURGERY. Edited by JOHN ASHHURST, JR., M.D. Vol. III. New York.

With becoming regularity the successive volumes of this great work are numbered with the things that are, ceasing to be that which is to be. The present book contains seven articles: Injuries and Diseases of the Muscles, Tendons, and Fasciæ, by Prof. P. S. Conner, of Cincinnati; Injuries and Surgical Diseases of the Lymphatics, by Edward Bellamy, of Charing Cross Hospital; Injuries of Blood-Vessels, by Dr. John A. Lidel, formerly Medical Inspector of the Army of the Potomac; Surgical Diseases of the Vascular System, by Prof. John A. Wyeth, of New York; Aneurism, by Richard Barwell, of Charing Cross Hospital; Injuries and Diseases of the Nerves, by Dr. M. Nicaise, Professor Agrégé of the Faculty of Medicine of Paris; and Injuries of Joints, by Prof. Edmund Andrews, of Chicago Medical College. The article by Prof. Nicaise will, we think, be found most interesting, because most novel, by most readers: it includes a discussion of tetanus. He commends nerve-cutting, and, with hesitation, also nerve-stretching, in the latter disorder. On the whole, the consideration of the treatment given of tetanus does not seem to us what it ought to be; there are no statistics, no citing of cases; opium is condemned, bromide of potassium said to be of no use unless employed in dangerous doses, whilst the unjustifiable intravenous injections of chloral are commended.

CHEMICAL AND PHYSICAL ANALYSIS OF MILK, CONDENSED MILK, AND INFANTS' MILK-FOODS. By Dr. NICHOLAS GERBER (Manager of the American-Swiss Milk Product Company of New York). Translated from the German by Dr. HERMANN ENDEMANN. New York, 1882.

The milkman of the last quarter of the nineteenth century "should examine the milk of single cows, and the yield of all mixed, with the aid of the lactodensimeter, Schatzman's cream-test, or lactobutyrometer." "The farmer shall keep notes respecting number of cows and daily yield of morning and evening milk;" "Milk from cows under medical treatment must not be used," etc., etc. (p. 98).

When the lion shall lie down with the lamb,

the milkman and the schoolmaster will presumably sit down together. But in the mean time it is recommended to compel the dairy-men to vend only pure milk; and doubtless city ordinances framed upon the sensible and lucid system of the author would be valuable. The public, however, are mostly inclined to pursue the policy of the late Sultan Abdul Aziz,—to enjoy life, and not to concern themselves over public affairs, especially those relating to hygiene. "The book is a laboratory guide which enables even beginners, and all such who cannot make the subject of milk-analysis a specialty, to cope with this otherwise complicated task." Its chapters include a description of normal cow's milk; physiological and other causes influencing the secretion; physical analysis of milk, and its microscopical and chemical examination; abnormal cow's milk; influence of food and adulteration; the milk of other animals,—goats, sheep, asses, and mares; also, condensed milk, and infant's milk-foods in powder. The volume closes with some comments on suitable governmental control of the milk-supply. The entire pamphlet contains only ninety-eight pages. In the language of Mrs. Toodles, "it is a decidedly good thing to have about the house," since both the public and the profession are interested in the purchase and consumption of milk.

E. T. B.

MEDICAL ESSAYS, 1842-1882. By OLIVER WENDELL HOLMES, M.D. Boston, Houghton, Mifflin & Co., 1883.

To review a book like the present is a fate to befall a medical scribbler but once in a lifetime. With one or two exceptions, the essays are historical, philosophical, and ethical, rather than scientific, and all of them are from the pen of Oliver Wendell Holmes,—a pen so facile that the like of it has scarcely been seen before in the annals of medicine. Then, again, most if not all of these essays have been published before, and sundry of them have been as well fought over as the fields of Waterloo and Blenheim. We therefore only catalogue the virtues of the book before us. They are: I. Homœopathy and its Kindred Delusions; II. The Contagiousness of Puerperal Fever; III. Currents and Counter-Currents in Medical Science; IV. Border-Lines of Knowledge in some Provinces of Medical Science; V. Scholastic and Bedside Teachings; VI. The Medical Profession in Massachusetts; VII. The Young Practitioner; VIII. Medical Libraries; IX. Some of my Early Teachers.

THE MICROSCOPE AND ITS REVELATIONS. By WILLIAM B. CARPENTER, C.B., M.D.

The current volume of Wood's Library, so called, published by William Wood & Co., of New York, is a reprint of the last edition of Carpenter's work on the Microscope, so

well known to every scientist who conquers nature with the microscope, and perhaps even more beloved by every amateur who amuses and improves his intellectuality with the same instrument.

## GLEANINGS FROM EXCHANGES.

ACUTE ATROPHY OF THE LIVER.—Specimens from a case of acute atrophy of the liver, which was to some extent unusual, were brought to the notice of the Pathological Society of London by Dr. Cavafy. The patient, who was a young man, aged 28, was taken suddenly ill the day before he was admitted into St. George's Hospital; he complained of feeling ill, began to vomit, became jaundiced, and in five or six hours unconscious, and so remained until his death, at 4 A.M. on the third day. When admitted, he was deeply jaundiced and unconscious, with fixed dilated pupils; the liver-dulness appeared to be diminished, but the abdomen was much distended; the urine contained leucin, tyrosine, and bile-pigment. At the necropsy, numerous small hemorrhages into the peritoneum, pleura, and endocardium were found, as well as hemorrhages into the substance of the lung. The liver, especially the right lobe, was small, and weighed only thirty-six ounces; it was not markedly soft, but rather tougher than natural, barely retaining the impress of the finger; as seen through the capsule, there was no lobular marking, and the color was a dull brownish red. The cut surface had the same color, with here and there a little brown-yellow material; the lobules were not distinguishable. The kidneys and heart were in an early stage of fatty degeneration. A careful search for micro-organisms had been made by Dr. Lingard, under the direction of Dr. Klein. None were found in any of the organs, except in the hemorrhagic patches in the lungs, where a pneumonic process was beginning; in the alveoli were numerous micro-organisms, namely, bacilli of two kinds, large and small, and micrococci; in one place the bacilli were seen in the walls of the blood-vessels; the necropsy, however, was made thirty-four hours after death, and Dr. Cavafy therefore did not attach any importance to these organisms, which were probably due to early putrefactive changes. The investigation of this case, therefore, had failed to confirm the statements of Waldeyer and others with regard to a specific micro-organism in this disease.—*British Medical Journal*.

TEST-PAPERS FOR URINE-ANALYSIS.—At the last meeting of the Clinical Society of London, Dr. George Oliver, of Harrogate, gave a demonstration of the method he employs for the detection of sugar in the urine by means of test-papers. The test-papers were charged with the carmine of indigo and car-

bonate of soda. When one was dropped into an ordinary half-inch test-tube, and as much water poured in as just covered the upper end, and heat applied, a transparent and true blue solution, resembling Fehling's in appearance, was obtained. (A transparent solution could not, at the meeting, be produced from the London water. The characteristic reaction with grape-sugar was, however, unimpaired.) If with the paper one drop of diabetic urine had been added, shortly after the first simmer, a beautiful series of color-changes appeared: first violet, then purple, then red, and finally straw-color; while, on the other hand, one drop of non-diabetic urine induced no alteration of color. The colors returned in the inverse order on shaking the tube, which allowed the air to mingle with the liquid. Reheating restored the colors again. Confirmation of the presence of glucose was obtained by dropping in a mercuric chloride paper, while the solution was still quite hot, after the complete development of the indigo reaction. Then there was produced immediately a blackish-green precipitate. No such precipitation occurred when a drop of non-saccharine urine was under examination by the indigo test; then the blue solution was merely turned into a transparent-green one. This test, as Dr. Oliver pointed out, discovers (a) the normal sugar; (b) the varying proportions of sugar which fill in the gap between the normal amount and that which characterizes diabetes mellitus, as in liver-derangements and vasomotor disturbances; (c) diabetic proportions. It possesses the following advantages over Fehling's test: 1. It will detect sugar in any proportion in the presence of albumen, peptone, blood, pus, or bile, and as readily as in ordinary diabetic urine. 2. It gives no play of colors with uric acid. 3. It possesses portability, cleanliness, and stability. Moore's, Trommer's, and Boettger's bismuth tests are all inferior in delicacy. As yet, Dr. Oliver had not discovered anything besides glucose which brought out the characteristic display of colors.—*British Medical Journal*.

ON CYSTOTOMY BY A MODIFIED LATERAL METHOD IN CERTAIN CASES OF ENLARGED PROSTATE.—Mr. Reginald Harrison says, in reference to cystotomy, that "the selection of a method for opening the bladder should have reference only to the object to be attained, or the contingencies that may arise. If, for instance, we desire merely to introduce the finger into it, as a preliminary to extracting a small stone, the median operation answers perfectly; whilst if a larger stone, or an unknown quantity of anything, has to be dealt with, the lateral incision will, as a rule, be preferable.

"It has been advanced by those who favor the median incision, which is practically a urethrotomy, that it is both simple and safe; its admitted disadvantage lies in the comparatively small space it provides for manipu-

lating and extracting; whilst, on the other hand, the lateral incision, though affording more room, is considered to be attended with an increased risk and a greater degree of difficulty, so far as its performance is concerned. The median operation need not necessarily involve anything more than the opening of the membranous urethra. The completed lateral operation further includes the division of structures constituting the neck of the bladder; and it is to this part of the proceeding that any increased risk or difficulty is to be attached.

"A little reflection shows that it is possible to closely assimilate the lateral with the median operation, that is to say, to dispense with the incision, not to the staff, but along the staff, should it be found, on exploration with the finger, that the additional room which the latter part provides is unnecessary for the object in view. It need hardly be said that this modification of the lateral method, where it is found, on digital exploration, to be feasible, frees the operator from executing the only portion of the operation to which any increased risk is attached; whilst, on the other hand, he has the consciousness that, should it turn out to be necessary, he can, by the completion of the deep incision along the staff, avail himself of all the advantages which are conceded by surgeons to the lateral method of opening the bladder." Mr. Harrison illustrates his method by the description of a case.—*British Medical Journal*.

### MISCELLANY.

A NEW DRESSING FOR WOUNDS.—From Prof. Bruns, of Tübingen, we receive a fresh addition to our means for carrying out the after-treatment of wounds, in the form of a preparation which he calls "wood-wool," and which he recommends to surgeons (*Berl. Klin. Woch.*, No. 20). Fine-grained wood in the form of splinters and shavings, such as are largely employed in paper-factories, according to Bruns, is the kind of material to be used in preparing the dressing which is called wood-wool. Pine wood is preferred, and especially the *Pinus picea*, which is poorer in resin and of coarser grain as compared with the wood of other pines and firs. The further preparation of the wood shavings and splinters consists in their reduction to a state of finer division by being rubbed through a wire sieve, then dried, and finally impregnated with various antiseptic substances. That considered best is a half per cent. of corrosive sublimate and ten per cent. of glycerine (the percentage apparently referring to the ratio between these substances and the wood-wool). The advantages of such a dressing are believed to be manifold. Compared with ashes and turf it is absolutely clean, fresh, and of white color, and is soft

and pliable like ordinary wool, and, withal, of extraordinary cheapness. It possesses, in virtue of its contained resin and ethereal oils, certain antiseptic properties, and is so easily adapted to the wounded parts and of such elasticity that a uniform and equable pressure is easily obtained. Its principal property, however, is its extraordinary power of taking up fluids: in this it excels all other forms of dressings; it absorbs twelve times its own weight of fluid, so that ten grammes of dried "wood-wool," after complete saturation, weigh one hundred and thirty grammes. Simple sawdust absorbs only three to four times and a half its weight of water, ashes only nine-tenths, and sand only four-tenths. This dressing has been in use by Bruns for half a year, and he has every reason to be greatly satisfied therewith. With the exception of one case of erysipelas, no secondary accidental wound-diseases were met with.—*Medical Times and Gazette.*

THE election of Prof. Theophilus Parvin to the chair of Obstetrics and Diseases of Women in Jefferson Medical College was one reflecting great credit upon the wisdom of the Board of Trustees, as it is generally regarded as the best selection that could be made for the school. Dr. Parvin, in leaving the Louisville University, in which he occupied a similar position, to come to Philadelphia, leaves behind him an excellent record, and brings with him the good wishes of a large number of friends. As a teacher, practitioner, and medical journalist he is widely known to the profession; and we welcome him to a larger field of labor in full confidence in his ability to fill it with distinction. He was born in 1829 in Buenos Ayres; during his early years he lived near this city, where he received in 1852 the degree of M.D. from the University of Pennsylvania. He was President of the American Medical Association in 1879, and his address at Atlanta will be long remembered by those who heard it. He has also held professorships in the Medical College of Ohio and in the College of Physicians and Surgeons of Indiana. He is writing a systematic work on Midwifery, which will probably be issued this fall. He is a scholarly writer, an impressive speaker, an original and experienced practitioner, and, withal, a man of sterling character and positive convictions.

DR. ELLERSLIE WALLACE, whose resignation on account of failing health has been already noticed, was elected Emeritus Professor of Obstetrics and Diseases of Women in the Jefferson Medical College by unanimous vote of the Trustees. He had been engaged in teaching at this school for the last twenty-one years.

DR. WILLIAM H. PARISH performed the Porro-Müller operation for Cæsarean section upon a woman at the Philadelphia Hospital, June 29. Both mother and child have thus

far survived the operation, of which fuller details will be presented as soon as the results of the operation can be definitely stated.

## OFFICIAL LIST

### OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JUNE 23 TO JULY 7, 1883.

SMART, CHARLES, MAJOR AND SURGEON.—Assigned to duty in the Office of the Surgeon-General U. S. Army, and, in addition to his duties in the Surgeon-General's Office, will continue to serve as a member of the National Board of Health. Paragraph 8, S. O. 147, A. G. O., June 27, 1883.

BIART, VICTOR, CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as post-surgeon at Fort Sisseton, D.T. Paragraph 1, S. O. 102, Department of Dakota, June 13, 1883.

WINNE, CHARLES K., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as post-surgeon at Fort Winfield Scott, California. Paragraph 1, S. O. 69, Department of California, June 19, 1883.

WORTHINGTON, JAMES C., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at cantonment on the Uncompahgre, Colorado. Paragraph 4, S. O. 128, Department of the Missouri, June 21, 1883.

EVERTS, EDWARD, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Coeur d'Alene, and assigned to duty as post-surgeon at Fort Lapwai, Idaho. S. O. 81, Department of the Columbia, June 14, 1883.

STRONG, NORTON, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from operations of Paragraph 2, S. O. 42, c. s., Department of the Platte, and assigned to duty with battalion of infantry now on duty between Forts Thornburgh and Bridger, Wyoming. Paragraph 2, S. O. 83, Department of the Platte, June 21, 1883.

To be assistant-surgeons, with the rank of captain, after five years' service, in accordance with Act of June 23, 1874: Assistant-Surgeon VICTOR BIART, June 6, 1883. Assistant-Surgeon WILLIAM W. GRAY, June 6, 1883. Assistant-Surgeon LOUIS BRECHERMIN, June 6, 1883. Assistant-Surgeon LOUIS A. LA GARDE, June 6, 1883. Assistant-Surgeon JUNIUS L. POWELL, June 6, 1883. A. G. O., June 25, 1883.

HEGER, A., MAJOR AND SURGEON.—Relieved from the further operation of Paragraph 9, S. O. 55, c. s., Department of Texas, and will return to his station, Fort Clark, Texas. Paragraph 2, S. O. 69, Department of Texas, June 25, 1883.

HAVARD, VALERY, CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty with expedition to complete the survey of the country west of the Rio Pecos, Texas. Paragraph 8, S. O. 68, Department of Texas, June 22, 1883.

RAYMOND, HENRY J., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence from July 14, 1883, to September 1, 1883, with permission to go beyond sea, and resignation accepted, to take effect September 1, 1883. S. O. 150, A. G. O., June 30, 1883.

### LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM JUNE 23 TO JULY 7, 1883.

Surgeon E. KERSHNER detached from the Navy-Yard, New York, July 1, and ordered to the Receiving-Ship "Colorado," New York.

Assistant-Surgeon T. C. CRAIG detached from the "Colorado," July 1, and ordered to the Naval Hospital, New York.

Assistant-Surgeon J. H. BRYAN detached from the Naval Hospital, New York, and ordered to the Museum of Hygiene, Washington, D.C.

P. A. Surgeon L. G. HRENEBERGER detached from the Museum of Hygiene, and ordered to the Navy-Yard, New York.

P. A. Surgeon J. F. BRANSFORD detached from special duty, Washington, D. C., and ordered to temporary duty at the Naval Academy, Annapolis, Md.

Medical Inspector A. C. RHOADES detached from the Naval Academy, Annapolis, Md., and ordered to the U.S.S. "Tennessee," and as Fleet-Surgeon of the North Atlantic Station, *vice* Medical Inspector T. W. Leach, detached and placed on sick-leave.